

UK Supplementary Registry of Outer Space Objects



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

October 2020

3	Introduction	54	SES-10
4	Glossary of terms	55	The Telesat Phase 1 LEO
5	MARCOPOLO 1/BSB-1A	56	SES-14
6	Intelsat 603	57	KazSTSat
7	MARCOPOLO-2/BSB-2	58	AMC-18
8	I2-F1	59	HS3-IS
9	I2-F2	60	SES-11
10	I2-F3	61	SES-12
11	I2-F4	62	SeaHawk-1
12	S80/T	63	Da Vinci
13	KITSAT-1	64	Echostar XXIII
14	POSAT-1	65	KazEOSat-2
15	KITSAT-2 (KITSAT-B)	66	PICASSO
16	HEALTHSAT-II		
17	NATO IVB		GIBRALTAR
18	FASAT-ALPHA	67	SATCOM-C4
19	I3-F1	68	GE SATCOM-1A (NSS-11)
20	I3-F2	69	SES-7 (Protostar II / Indostar II)
21	I3-F3	70	SES-3
22	Intelsat 26		
23	THOR II		CAYMAN ISLANDS
24	I3-F4	71	ZENIT 3 Rocket Booster (DEMOSAT)
25	TMSAT-1	72	ZENIT 3 Rocket Booster (DIRECTV-R1)
26	THOR III	73	ZENIT 3 Rocket Booster (ICO#1)
27	I3-F5		
28	Galaxy 27		
29	TSINGHUA-1		
30	ICO-F2		
31	Artemis		
32	SIRIUS 4		
33	SSTL Deimos-1		
34	SES-1		
35	Astra 1N		
36	N2		
37	NigeriaSat-X (NX)		
38	SES-2		
39	NSS14 (SES-4)		
40	ADS-1B (EXACTVIEW-1)		
41	Astra 2F		
42	SES-6		
43	Astra 2E		
44	SES-8		
45	Astra 5B		
46	Astra 2G		
47	AISat-1B		
48	Sapphire		
49	RapidEye-1		
50	RapidEye-2		
51	RapidEye-3		
52	RapidEye-4		
53	RapidEye-5		

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.

Space objects are entered onto the UK Supplementary Register where licences have been issued under the Outer Space Act 1986, the Outer Space Act 1986 (Gibraltar) Order 1996 or the Outer Space Act 1986 (Cayman Islands) Order 1998, but where the United Kingdom was either:

- (i) not a "launching state" for the relevant space object, or
- (ii) where it was jointly determined that another "launching state" should register the relevant space object.

United Nations Office for Outer Space Affairs website:

<http://www.oosa.unvienna.org/oosa/en/SORregister/index.html>

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.

MARCOPOLO 1/BSB-1A

Owner/Operator: British Satellite Broadcasting Ltd
The Marcopolo Building
Chelsea Bridge
Queenstown Road
London
SW8 4NQ

Date of launch: 27 August 1989
Location of launch: Cape Canaveral, USA

Designation: 1989-067A
Catalogue Number: 20193

Nodal period: 435.76 minutes
Inclination: 0.15 degrees
Apogee: 35,787 km
Perigee: 35,777 km
Orbital position: 130° W

General function: Direct Broadcast Satellite
Notified to the UN: 12 April 1990 – United Kingdom

Disposed or decayed: Now reorbited to approximately 300 km above GEO.
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 4 April 1990
**Licence issued under the
Outer Space Act 1986:** 21 August 1989

Additional information: Notified the UN on 1 February 1999 that title and control of the satellite had been transferred to a Swedish national (Nordiska Satellitaktiebolaget, Vretenvagen 10, SE 171 54 Solna, Sweden). Now operated as SIRIUS 1 and carried on Swedish register of space objects.

Intelsat 603

Owner/Operator:	Intelsat Global Sales and Marketing Ltd 100 New Bridge Street London EC4V 6JA
Date of launch:	14 March 1990
Location of launch:	Cape Canaveral, USA
Designation:	1990-021A
Catalogue Number:	20523
Nodal period:	One sidereal day
Inclination:	7.33 degrees
Apogee:	36,000 km (approx)
Perigee:	36,000 km (approx)
Orbital position:	11.5 E
General function:	Telecommunications
Notified to the UN:	
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	17 November 2010
Additional information:	The UK is not the launching state for this object. In orbit operations licence issued by the UK on 17 November 2010. On 8 January 2013 the control of the satellite was transferred to the Administration of the Republic of Argentina. As a result, the licence has now expired.

MARCOPOLO-2/BSB-2

Owner/Operator: British Satellite Broadcasting Ltd
6 Centaurs Business Park
Grant Way
Isleworth
Middlesex
TW7 5QD

Date of launch: 17 August 1990
Location of launch: Cape Canaveral, USA

Designation: 1990-074A
Catalogue Number: 20762

Nodal period: 1436.2 minutes
Inclination: 0.36 degrees
Apogee: 35,716 km
Perigee: 35,859 km
Orbital position: 0.80 W

General function: Direct Broadcast Satellite
Notified to the UN: 23 July 1991 – United Kingdom

Disposed or decayed: Now reorbited to approximately 300 km above GEO.
Disposal Notified to the UN: 15 June 2007

**Accepted onto UK
Supplementary Register of
Space Objects:** 5 June 1991
**Licence issued under the
Outer Space Act 1986:** 8 June 1990

Additional information: Now operated by Norway by Norwegian national (Telenor Satellite Services, Keysergate 13/15, St. Olavs Plass, Oslo) as Thor 1 (1992).

I2-F1

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

Date of launch: 30 October 1990
Location of launch: Cape Canaveral, Florida, USA

Designation: 1990-093A
Catalogue Number: 20918

Nodal period: 23 hours 56 minutes
Inclination: 1.95 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 109 E

General function: Telecommunications satellite
Notified to the UN:

Disposed or decayed: De-orbited on 20 April 2013 to lowest altitude of 383 km and highest altitude of 412 km above the geostationary ring.
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information:

I2-F2

Owner/Operator:	Inmarsat Holdings Ltd 99 City Road London EC1Y 1AX
Date of launch:	8 March 1991
Location of launch:	Cape Canaveral, Florida, USA
Designation:	1991-018A
Catalogue Number:	21149
Nodal period:	1436 minutes
Inclination:	2.71 degrees
Apogee:	35,815 km
Perigee:	35,767 km
Orbital position:	142 W
General function:	Telecommunications satellite
Notified to the UN:	9 September 2002 (please see additional information)
Disposed or decayed:	18 December 2014 - Satellite consumed remaining onboard fuel to raise the orbit altitude to 440 km above GSO. The satellite was passivated by depleting accessible sources of energy and then switching off all subsystems per Space Debris Mitigation Guidelines. Geostationary position: – 142.0 degrees East.
Disposal Notified to the UN:	24 February 2014
Accepted onto UK Supplementary Register of Space Objects:	23 March 1999
Licence issued under the Outer Space Act 1986:	23 March 1999
Additional information:	The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

I2-F3

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

Date of launch: 16 December 1991
Location of launch: Kourou, French Guiana

Designation: 1991-084B
Catalogue Number: 21814

Nodal period: 1436 minutes
Inclination: 1.6 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 142 W

General function: Telecommunications satellite
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed: De-orbited on 28 April 2006 reaching an altitude of 200 km. Further burns were completed to raise beyond 1,000 km.

Disposal Notified to the UN:

Accepted onto UK Supplementary Register of Space Objects: 23 March 1999
Licence issued under the Outer Space Act 1986: 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

I2-F4

Owner/Operator:	Inmarsat Holdings Ltd 99 City Road London EC1Y 1AX
Date of launch:	15 April 1992
Location of launch:	Kourou, French Guiana
Designation:	1992-021B
Catalogue Number:	21940
Nodal period:	1436 minutes
Inclination:	2.07 degrees
Apogee:	35,799 km
Perigee:	35,773 km
Orbital position:	107 E
General function:	Telecommunications satellite
Notified to the UN:	9 September 2002 (please see additional information)
Disposed or decayed:	5 April 2012 – Satellite achieved disposal altitude of 667 km above GEO and fully passivated.
Disposal Notified to the UN:	24 February 2015
Accepted onto UK Supplementary Register of Space Objects:	23 March 1999
Licence issued under the Outer Space Act 1986:	23 March 1999
Additional information:	The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

S80/T

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

Date of launch: 7 August 1992
Location of launch: Kourou, French Guiana

Designation: 1992-052C
Catalogue Number: 22078

Nodal period: 111.94 minutes
Inclination: 66.09 degrees
Apogee: 1,328 km
Perigee: 1,302 km
Orbital position:

General function: Experimental VHF communications and service demonstration
Notified to the UN: 28 January 2004 - France

Disposed or decayed:
Disposal Notified to the UN: Notified by France on 17 September 2007 – satellite no longer operational.

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

Additional information: Inactive

KITSAT-1

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

Date of launch: 10 August 1992
Location of launch: Kourou, French Guiana

Designation: 1992-052B
Catalogue Number: 22077

Nodal period: 111.88 minutes
Inclination: 66.08 degrees
Apogee: 1,329 km
Perigee: 1,304 km
Orbital position:

General function: Communication & Earth Observation Payloads
Notified to the UN: 4 January 1996 - Republic of Korea

Disposed or decayed:
Disposal Notified to the UN:

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

Additional information:

POSAT-1

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

Date of launch: 26 September 1993
Location of launch: Kourou, French Guiana

Designation: 1993-061G
Catalogue Number: 22829

Nodal period: 100.7 minutes
Inclination: 98.5 degrees
Apogee: 803 km
Perigee: 788 km
Orbital position:

General function: Experimental research
Notified to the UN: 8 June 1994 – United States

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 6 July 1993
**Licence issued under the
Outer Space Act 1986:** 6 July 1993

Additional information:

KITSAT-2 (KITSAT-B)

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

Date of launch: 26 September 1993
Location of launch: Kourou, French Guiana

Designation: 1993-061C
Catalogue Number: 22828

Nodal period: 100.8 minutes
Inclination: 98.6 degrees
Apogee: 805.7 km
Perigee: 790.4 km
Orbital position:

General function: Communication & Earth Observation Payloads
Notified to the UN: 4 January 1996 – Republic of Korea

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 6 July 1993
**Licence issued under the
Outer Space Act 1986:** 6 July 1993

Additional information:

HEALTHSAT-II

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

Date of launch: 26 September 1993
Location of launch: Kourou, French Guiana

Designation: 1993-061E
Catalogue Number: 22827

Nodal period: 100.7 minutes
Inclination: 98.6 degrees
Apogee: 802 km
Perigee: 790 km
Orbital position:

General function: Communications satellite
Notified to the UN: 8 June 1994 – United States

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 2 October 1993
**Licence issued under the
Outer Space Act 1986:** 2 August 1993

Additional information:

NATO IVB

Owner/Operator:	Airbus Defence and Space Limited Gunnels Wood Road Stevenage Hertfordshire SG1 2AS
Date of launch:	8 December 1993
Location of launch:	United States
Designation:	1993-076A
Catalogue Number:	2291
Nodal period:	1436.237 minutes
Inclination:	11.474 degrees
Apogee:	35,803.550 km
Perigee:	35,775.113 km
Orbital position:	33 E
General function:	Military Communications
Notified to the UN:	9 June 1994 - United States
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	March 2015
Licence issued under the Outer Space Act 1986:	29 May 2003
Additional information:	Ownership of the spacecraft passed from NATO to the United Kingdom on 8 December 2010 and from the United Kingdom to Paradigm Secure Communications Limited on the same day. On 1 January 2015, Paradigm's rights and responsibilities passed to Airbus Defence and Space Ltd.

FASAT-ALPHA

Owner/Operator:	Surrey Satellite Technology Ltd University of Surrey Guildford Surrey GU2 5XH
Date of launch:	31 August 1995
Location of launch:	Plesetsk, Russian Federation
Designation:	1995-046A
Catalogue Number:	Not separately catalogued (see additional information)
Nodal period:	97.7 minutes
Inclination:	82.5 degrees
Apogee:	669 km
Perigee:	632 km
Orbital position:	
General function:	
Notified to the UN:	22 September 1995 – Ukraine 13 December 2012 – Chile
Disposed or decayed:	Expected life 5 years
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	16 August 1995
Licence issued under the Outer Space Act 1986:	16 August 1995
Additional information:	Failed to separate from Ukrainian host - SICH-1.

I3-F1

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

Date of launch: 3 April 1996
Location of launch: Cape Canaveral, Florida, USA

Designation: 1996-020A
Catalogue Number: 23839

Nodal period: 23 hours 56 minutes
Inclination: 0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 63.9 E

General function: Telecommunications
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

I3-F2

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

Date of launch: 6 September 1996
Location of launch: Baikonur, Kazakhstan

Designation: 1996-053A
Catalogue Number: 24307

Nodal period: 23 hours 56 minutes
Inclination: 0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 15.5 E

General function: Telecommunications
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK). Began to manoeuvre 05/02/19 and now in permanent drift mode.

I3-F3

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

Date of launch: 18 December 1996
Location of launch: Cape Canaveral, Florida, USA

Designation: 1996-070A
Catalogue Number: 24674

Nodal period: 23 hours 56 minutes
Inclination: 0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 178.1 E

General function: Telecommunications
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

Intelsat 26

Owner/Operator:	Intelsat Global Sales & Market Ltd 100 New Bridge Street London EC4V 6JA
Date of launch:	17 February 1997
Location of launch:	Cape Canaveral, USA
Designation:	1997-007A
Catalogue Number:	24732
Nodal period:	One sidereal day
Inclination:	5.1 degrees
Apogee:	36,000 km (approx)
Perigee:	36,000 km (approx)
Orbital position:	62.2 E
General function:	The purpose of the mission is to operate a telecommunications satellite and to provide capacity for the provision of various telecommunications services.
Notified to the UN:	24 April 1998 – Japan
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	10 October 2013
Additional information:	Intelsat 26 was formerly known by its commercial name of “JCSAT-4” or “JCSAT-R”. The UK authorised operations only. IS 26 was redeployed to orbital position 65.8 E on 11 July 2017. IS 26 was redeployed to orbital position 62.28E on 25 September 2018. Redeployed to 63.65E 25 November 2019.

THOR II

Owner/Operator: Telenor (UK) Ltd
1st Floor
40 Bernhard Street
London
WC1N 1LE

Date of launch: 20 May 1997
Location of launch: Cape Canaveral, Florida, USA

Designation: 1997-025A
Catalogue Number: 24808

Nodal period: 23 hours 56 minutes
Inclination: <0.05 degrees
Apogee: 35,794 km
Perigee: 35,781 km
Orbital position: 23.3 E

General function: Communications satellite serving Scandinavia.
Notified to the UN:

Disposed or decayed: On 10 January 2013 the satellite was de-orbited 350 km above the geostationary ring.
Disposal Notified to the UN:

Accepted onto UK Supplementary Register of Space Objects: 27 February 1998
Licence issued under the Outer Space Act 1986: 27 February 1998

Additional information: Licence issued to take on lease of the satellite.

I3-F4

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

Date of launch: 3 June 1997
Location of launch: Kourou, French Guiana

Designation: 1997-027A
Catalogue Number: 24819

Nodal period: 23 hours 56 minutes
Inclination: 0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 54 W

General function: Telecommunications
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed: Deorbited on 11 May 2016
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK).

TMSAT-1

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

Date of launch: 10 July 1998
Location of launch: Baikonur, Kazakhstan

Designation: 1998-043C
Catalogue Number: 25396

Nodal period: 101.1 minutes
Inclination: 98 degrees
Apogee: 815 km
Perigee: 811 km
Orbital position:

General function: Earth imaging
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 12 January 1998
**Licence issued under the
Outer Space Act 1986:** 12 January 1998

Additional information:

THOR III

Owner/Operator: Telenor (UK) Ltd
1st Floor
40 Bernhard Street
London
WC1N 1LE

Date of launch: 10 June 1998
Location of launch: Cape Canaveral, Florida, USA

Designation: 1998-035A
Catalogue Number: 25358

Nodal period: 23 hours 56 minutes
Inclination: <0.015 degrees
Apogee: 35,819 km
Perigee: 35,754 km
Orbital position: 4.3 W

General function: Broadcasting to the Nordic countries.
Notified to the UN:

Disposed or decayed: Expected life 11 years & 6 months
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 27 February 1998
**Licence issued under the
Outer Space Act 1986:** 27 February 1998

Additional information: Licence issued to take on lease of the satellite.

I3-F5

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

Date of launch: 4 February 1998
Location of launch: Kourou, French Guiana

Designation: 1998-006B
Catalogue Number: 25153

Nodal period: 23 hours 56 minutes
Inclination: 0.4 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 54.2°W

General function: Telecommunications
Notified to the UN: 9 September 2002 (please see additional information)

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 23 March 1999
**Licence issued under the
Outer Space Act 1986:** 23 March 1999

Additional information: The UK notified the UN of this satellite but not as launching state. Following the privatisation of the international organisation INMARSAT, title and control of this satellite was transferred to Inmarsat Holdings Ltd (a company incorporated in the UK). I3-F5 has now moved to orbital position 306 E. Updated August 2018 - relocated to 54.2°W.

Galaxy 27

Owner/Operator:	Intelsat Global Sales & Market Ltd 100 New Bridge Street London EC4V 6JA
Date of launch:	25 September 1999
Location of launch:	Kourou, French Guiana
Designation:	1999-052A
Catalogue Number:	25922
Nodal period:	One sidereal day
Inclination:	No inclination in orbit
Apogee:	36,000 km (approx)
Perigee:	36,000 km (approx)
Orbital position:	66.2 E
General function:	The purpose of the mission is to operate a telecommunications satellite and to provide capacity for the provision of various telecommunications services.
Notified to the UN:	7 March 2000 - United States
Disposed or decayed:	Deorbited on 11 May 2016
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	10 September 2013
Additional information:	UK authorised in orbit operations only. Galaxy 27 was formerly known as Telstar 7.

TSINGHUA-1

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

Date of launch: 28 June 2000
Location of launch: Plesetsk, Russian Federation

Designation: 2000-033B
Catalogue Number: 26385

Nodal period: 98.66 minutes
Inclination: 98.13 degrees
Apogee: 7,084.14 km
Perigee: 7,016.32 km
Orbital position:

General function: Earth imaging - demonstrator DMC
Notified to the UN: 6 December 2000 - China

Disposed or decayed:
Disposal Notified to the UN:

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

Additional information: The Tsinghua-1 microsatellite was jointly developed by the Tsinghua University of China and Surrey Satellite Technology Ltd.

ICO-F2

Owner/Operator: ICO Services Ltd
Symphony House
Cowley Business Park
Uxbridge
UB8 2AD

Date of launch: 19 June 2001
Location of launch: Cape Canaveral, Florida, USA

Designation: 2001-026A
Catalogue Number: 26857

Nodal period: 351.2 minutes
Inclination: 44.91 degrees
Apogee: 10,113.4 km
Perigee: 10,109.1 km
Orbital position:

General function: Telecommunications
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 27 September 2001
**Licence issued under the
Outer Space Act 1986:** 12 June 2001

Additional information: Ownership and operating rights were transferred to Omnispace, a US company in 2012 and UN registration transferred to US.

Artemis

Owner/Operator:	Avanti Communications Group PLC Avanti Communications Ltd Cobham House 20 Black Friars Lane London EC4V 6EB
Date of launch:	12 July 2001
Location of launch:	Kourou, French Guiana
Designation:	2001-029A
Catalogue Number:	26863
Nodal period:	1436 minutes
Inclination:	10.7 degrees
Apogee:	35,807.2 km
Perigee:	35,778.5 km
Orbital position:	21.55 E
General function:	ARTEMIS is a data relay satellite with optical, S-band and Ka-band payloads including also a L-band land mobile and navigation payload for the European global navigation overlay system (EGNOS).
Notified to the UN:	11 August 2003 – European Space Agency
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	20 December 2013
Additional information:	UK authorised in orbit operations only. Approved moves from 21.55E to 55E then 123E in 2016. Notification from ESA of decommissioning December 2018.

SIRIUS 4

Owner/Operator: SES Satellite Leasing Ltd
16 Athol Street
Douglas
Isle of Man
IM1 1JA

Date of launch: 17 November 2007
Location of launch: Baikonur, Kazakhstan

Designation: 2007-057A
Catalogue Number: 32299

Nodal period: 1 sidereal day
Inclination: 0.0472 degrees
Apogee: 35,803.1 km
Perigee: 35,770.5 km
Orbital position: 5 E

General function: Communications
Notified to the UN: 5 February 2008 - Sweden

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 12 November 2007
**Licence issued under the
Outer Space Act 1986:** 12 November 2007

Additional information: The UK authorised the launch of this satellite. The satellite is operated by SES Sirius in Sweden – operation is authorised by the Swedish National Space Board.

SSTL Deimos-1

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

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

Designation: 2009-041A
Catalogue Number: 35681

Nodal period: 97.43 – 97.9 minutes
Inclination: 98.13 degrees
Apogee: 680 km
Perigee: 665 km
Orbital position:

General function: Disaster Monitoring
Notified to the UN: 27 January 2010 - Spain

Disposed or decayed:
Disposal Notified to the UN:

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

Additional information: Satellite owned and operated in Spain.

SES-1

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

Date of launch: 24 April 2010
Location of launch: Baikonur, Kazakhstan

Designation: 2010-016A
Catalogue Number: 36516

Nodal period: 86,169.5 seconds
Inclination: 0.0472 degrees
Apogee: 35,803.1 km
Perigee: 35,770.5 km
Orbital position: 101 W

General function: Communications
Notified to the UN: 26 July 2012 – United States

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** March 2011
**Licence issued under the
Outer Space Act 1986:** 22 April 2010

Additional information: UK authorised launch only. Satellite owned, operated and registered with the UN by the United States.

Astra 1N

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

Date of launch: 6 August 2011
Location of launch: Kourou, French Guiana

Designation: 2011-041A
Catalogue Number: 37775

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 28.2 E

General function: Commercial telecommunications
Notified to the UN: 15 July 2014 - Luxembourg

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 29 June 2011

Additional information: UK authorised launch only. Satellite is owned and operated by a company incorporated in Luxembourg. Astra 1N has now moved to orbital position 19.2 E

N2

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

Date of launch: 17 August 2011
Location of launch: Ths Cosmodrome, Yasny, Russian Federation

Designation: 2011-044B
Catalogue Number: 37789

Nodal period: 98.7 minutes
Inclination: 98.2 degrees
Apogee: 704 km
Perigee: 692 km
Orbital position:

General function: Provision of remote sensing data to help Nigeria understand and manage its environment and natural resources.
Notified to the UN: 1 July 2014 - Nigeria

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 6 September 2012

Additional information: Satellite is owned and operated by National Space Research and Development Agency (Nigeria).

NigeriaSat-X (NX)

Owner/Operator:	Surrey Satellite Technology Ltd Tycho House 20 Stephenson Road Guildford GU2 7YE
Date of launch:	17 August 2011
Location of launch:	Yasny launch base, Russian Federation
Designation:	2011-044C
Catalogue Number:	37790
Nodal period:	98.8 minutes
Inclination:	98.18 degrees
Apogee:	716.9 km
Perigee:	697.6 km
Orbital position:	
General function:	NX is an Earth observation mission. It is a space-based optical sensor system that provides accurate and timely images of the Earth. The NX imaging payload provides medium resolution 22-m ground-sample distance, 3-band multispectral imaging. NX is a contributing sensor to the Disaster Monitoring Constellation. Imagery transmitted to ground stations will be used for humanitarian, environmental and commercial applications.
Notified to the UN:	1 July 2014 – Nigeria
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	May 2015
Licence issued under the Outer Space Act 1986:	17 July 2014
Additional information:	OSA licence issued to SSTL for operation of the satellite for a period of approximately two years.

SES-2

Owner/Operator:	SES Satellite Leasing Ltd First Floor Belgravia House 34 - 44 Circular Road Douglas Isle of Man IM1 1AE
Date of launch:	21 September 2011
Location of launch:	Kourou, French Guiana
Designation:	2011-049A
Catalogue Number:	37809
Nodal period:	1435.8 – 1436.4 minutes
Inclination:	0.05 degrees
Apogee:	35,820 km
Perigee:	35,752 km
Orbital position:	87 W
General function:	SES-2 is a communications satellite which carries video and data services.
Notified to the UN:	14 November 2011– United States
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	18 August 2011
Additional information:	UK authorised launch only. Satellite owned and registered with the UN by the United States.

NSS14 (SES-4)

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

Date of launch: 14 February 2012
Location of launch: Baikonur, Kazakhstan

Designation: 2012-007A
Catalogue Number: 38087

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 338 E

General function: Commercial Telecommunications
Notified to the UN: 4 November 2013 – The Netherlands

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 19 December 2011

Additional information: Satellite is owned and operated by a company incorporated in the Netherlands.

ADS-1B (EXACTVIEW-1)

Owner/Operator:	Surrey Satellite Technology Ltd Tycho House 20 Stephenson Road Guildford GU2 7YE
Date of launch:	22 July 2012
Location of launch:	Baikonur, Kazakhstan
Designation:	2012-039C
Catalogue Number:	38709
Nodal period:	101.2 minutes
Inclination:	98.9 degrees
Apogee:	822 km
Perigee:	805 km
Orbital position:	
General function:	The ADS system is an ocean surveillance system designed to capture, downlink, process and distribute AIS signals currently being transmitted by over 68,000 vessels worldwide.
Notified to the UN:	10 December 2012 – Canada
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	January 2014
Licence issued under the Outer Space Act 1986:	20 July 2012 & 19 November 2013
Additional information:	The UK authorised operations only.

Astra 2F

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

Date of launch: 28 September 2012
Location of launch: Kourou, French Guiana

Designation: 2012-051A
Catalogue Number: 38778

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 28.2 E

General function: Commercial Telecommunications
Notified to the UN: 15 July 2014 - Luxembourg

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 3 September 2012

Additional information: UK authorised launch only. Satellite is owned and operated by a company incorporated in Luxembourg.

SES-6

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

Date of launch: 3 June 2013
Location of launch: Baikonur, Kazakhstan

Designation: 2013-026A
Catalogue Number: 39172

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 40.5 W

General function: Communications
Notified to the UN: 23 September 2013 – The Netherlands

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 22 May 2013

Additional information: UK authorised the launch only. Satellite is owned and operated by a company incorporated in the Netherlands.

Astra 2E

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

Date of launch: 29 September 2013
Location of launch: Baikonur, Kazakhstan

Designation: 2013-056A
Catalogue Number: 39285

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 28.27 E (from February 2014)

General function: Communications
Notified to the UN: 15 July 2014 - Luxembourg

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 30 August 2013

Additional information: UK authorised launch only. Satellite is owned and operated by a company incorporated in Luxembourg.

SES-8

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

Date of launch: 3 December 2013
Location of launch: Cape Canaveral, USA

Designation: 2013-071A
Catalogue Number: 39460

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 81 E

General function: Communications
Notified to the UN: 14 February 2014 - The Netherlands

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 30 October 2013

Additional information: UK authorised launch only. Satellite is owned by a company incorporated in the Netherlands. Transferred to orbital position 95E in January 2014.

Astra 5B

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

Date of launch: 22 March 2014
Location of launch: Kourou, French Guiana

Designation: 2014-011B
Catalogue Number: 39617

Nodal period: 1,435.8-1,436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 31.55 E

General function: Encrypted and unencrypted transmission of radio, television, multimedia data, VSAT and broadband services.
Notified to the UN: 15 July 2014 - Luxembourg

Disposed or decayed:
Disposal Notified to the UN:

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

Additional information: UK authorised launch only. Satellite is owned and operated by a company incorporated in Luxembourg.

Astra 2G

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

Date of launch: 27 December 2014
Location of launch: Baikonur Cosmodrome, Kazakhstan

Designation: 2014-089A
Catalogue Number: 40364

Nodal period: 1,435.8-1,436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 28.2 East (from 16 June 2015)

General function: Communications.
Notified to the UN: To be notified by Luxembourg.

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** May 2015
**Licence issued under the
Outer Space Act 1986:** 14 November 2014

Additional information: UK authorised launch only. Satellite is owned and operated by a company incorporated in Luxembourg.

AlSat-1B

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

Date of launch: 26 September 2016
Location of launch: Sriharikota, India

Designation: 2016-059C
Catalogue Number: 41785

Nodal period: 98.41 minutes
Inclination: 98.20 degrees
Apogee: 705 km
Perigee: 660 km
Orbital position:

General function: Medium Resolution Earth Observation Satellite.
Notified to the UN: 21 November 2016 - Algeria

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2017
**Licence issued under the
Outer Space Act 1986:** 6 September 2016

Additional information: Satellite operated and registered with the UN by Algeria.

Sapphire

Owner/Operator:	Surrey Satellite Technology Limited Tycho House 20 Stephenson Road Guildford Surrey GU2 7YE
Date of launch:	25 February 2013
Location of launch:	Sriharikota, India
Designation:	2013-009C
Catalogue Number:	39088
Nodal period:	100.44 minutes
Inclination:	98.63 degrees
Apogee:	788 km
Perigee:	771 km
Orbital position:	
General function:	Space-based electro-optical sensor designed to detect and track deep space objects at altitudes between 6,000 km and 40,000 km above the Earth's surface, including operational and non-operational satellites and other manmade objects.
Notified to the UN:	15 April 2013 - Canada
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	July 2017
Licence issued under the Outer Space Act 1986:	4 February 2013
Additional information:	

RapidEye-1

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

Date of launch: 29 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-040C
Catalogue Number: 33314

Nodal period: 97.3 minutes
Inclination: 97.98 degrees
Apogee: 648 km
Perigee: 611 km
Orbital position:

General function: Commercial Earth observation.
Notified to the UN: 26 May 2009 - Germany

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** July 2017
**Licence issued under the
Outer Space Act 1986:** 28 August 2008

Additional information: End of life March 2020

RapidEye-2

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

Date of launch: 29 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-040A
Catalogue Number: 33312

Nodal period: 97.3 minutes
Inclination: 97.98 degrees
Apogee: 639 km
Perigee: 620 km
Orbital position:

General function: Commercial Earth observation.
Notified to the UN: 26 May 2009 - Germany

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** July 2017
**Licence issued under the
Outer Space Act 1986:** 28 August 2008

Additional information: End of life March 2020

RapidEye-3

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

Date of launch: 29 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-040D
Catalogue Number: 33315

Nodal period: 97.3 minutes
Inclination: 97.98 degrees
Apogee: 639 km
Perigee: 620 km
Orbital position:

General function: Commercial Earth observation.
Notified to the UN: 26 May 2009 - Germany

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** July 2017
**Licence issued under the
Outer Space Act 1986:** 28 August 2008

Additional information: End of life March 2020

RapidEye-4

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

Date of launch: 29 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-040E
Catalogue Number: 33316

Nodal period: 97.3 minutes
Inclination: 97.98 degrees
Apogee: 639 km
Perigee: 621 km
Orbital position:

General function: Commercial Earth observation.
Notified to the UN: 26 May 2009 - Germany

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** July 2017
**Licence issued under the
Outer Space Act 1986:** 28 August 2008

Additional information: End of life March 2020

RapidEye-5

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

Date of launch: 29 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-040B
Catalogue Number: 33313

Nodal period: 97.3 minutes
Inclination: 97.98 degrees
Apogee: 642 km
Perigee: 617 km
Orbital position:

General function: Commercial Earth observation.
Notified to the UN: 26 May 2009 - Germany

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** July 2017
**Licence issued under the
Outer Space Act 1986:** 28 August 2008

Additional information: End of life March 2020

SES-10

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

Date of launch: 30 March 2017
Location of launch: Cape Canaveral, USA

Designation: 2017-017A
Catalogue Number: 42432

Nodal period: 1,436 minutes
Inclination: 0.04 degrees
Apogee: 35,796 km
Perigee: 35,778 km
Orbital position: 67 W

General function: Telecommunications Satellite
Notified to the UN: 1 June 2017 - USA

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 13 September 2017
**Licence issued under the
Outer Space Act 1986:** 24 March 2017

Additional information: UK licenced launch only. Satellite operated and registered with the UN by USA.

The Telesat Phase 1 LEO

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: Sriharikota, India

Designation: 2018-004S
Catalogue Number: 43113

Nodal period: 105.1 minutes
Inclination: 99.5 degrees
Apogee: 1,016.10 km
Perigee: 1,003.60 km
Orbital position: N/A

General function: Telecommunications Satellite
Notified to the UN: 31 January 2019 - USA

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 03/04/2019
**Licence issued under the
Outer Space Act 1986:** 26 September 2018

Additional information: UK licenced launch only. Satellite operated and registered with the UN by USA.

SES-14

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

Date of launch: 25 January 2018
Location of launch: Kourou, French Guiana

Designation: 2018-012B
Catalogue Number: 43175

Nodal period: 1,436.1 minutes
Inclination: 0.02 degrees
Apogee: 35798.60 km
Perigee: 35789.10 km
Orbital position: 47.5 W

General function: Telecommunications Satellite
Notified to the UN: 7 June 2018 - Brazil

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 19 July 2019
**Licence issued under the
Outer Space Act 1986:** 19 January 2018

Additional information: UK licenced launch only. Satellite operated and registered with the UN by Brazil.

KazSTSat

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

Date of launch: 03 December 2018
Location of launch: Vandenberg Airbase

Designation: 2018-099AB
Catalogue Number: 43783

Nodal period: 96.3 minutes
Inclination: 97.8 degrees
Apogee: 599.7 km
Perigee: 579 km
Orbital position: N/A

General function: Earth Observation
Notified to the UN: N/A (Kazakstan)

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Supplementary Register of Space Objects: 26 July 2019
Licence issued under the Outer Space Act 1986: 09 October 2018

Additional information: UK licenced operations only. Satellite operated and to be registered with the UN by Kazakstan.

SES AMC-18

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

Date of launch: 8th December 2006
Location of launch: CSG Kourou, French Guiana

Designation: 2006-054B
Catalogue Number: 29644

Nodal period: 23h 56m
Inclination: 0.1 degrees
Apogee: 35,797 km
Perigee: 35,776 km
Orbital position: 105 W

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

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 4 December 2006
Licence issued under the Outer Space Act 1986: 4 December 2006

Additional information: Operated by SES Satellites (Gibraltar) Ltd – operation licence issued by Gibraltar Regulatory Authority on 27 September 2006. USA licensed from March 2018 with Gibraltar as back up. Transferred to orbital position 139°W in April 2018.

HS3-IS (Hellas Sat-3)

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

Date of launch: 28 June 2017
Location of launch: Kourou, French Guiana

Designation: 2017-040A
Catalogue Number: 42814

Nodal period: 1436.1
Inclination: 0.048
Apogee: 42168
Perigee: 42162
Orbital position:

General function: Communications
Notified to the UN: Pending by Greece

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2019
Licence issued under the Outer Space Act 1986: 28 June 2017

Additional information:

SES-11/EchoStar 105

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

Date of launch: 11 October 2017
Location of launch: Cape Canaveral, USA

Designation: 2017-063A
Catalogue Number: 42967

Nodal period: 1436.1
Inclination: 0.04
Apogee: 35804
Perigee: 35782
Orbital position: 104.9W

General function: Communications
Notified to the UN: Pending by USA

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK Register
of Space Objects:** September 2019
**Licence issued under the
Outer Space Act 1986:** 26 September 2017

Additional information:

SES-12

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

Date of launch: 04 June 2018
Location of launch: Cape Canaveral, USA

Designation: 2018-049A
Catalogue Number: 43488

Nodal period: 1436.1
Inclination: 0.04
Apogee: 35800
Perigee: 35787
Orbital position: 95E

General function: Communications
Notified to the UN: Pending by USA

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK Register
of Space Objects:** September 2019
**Licence issued under the
Outer Space Act 1986:** 11 May 2018

Additional information:

SeaHawk-1

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

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

Designation: 2018-099BQ
Catalogue Number: 43820

Nodal period: 96.29
Inclination: 97.74
Apogee: 590
Perigee: 572
Orbital position:

General function: Earth Observations
Notified to the UN: 08/01/2020

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2019
Licence issued under the Outer Space Act 1986: 14 November 2018

Additional information:

Da Vinci

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

Date of launch: 16 December 2018
Location of launch: Launch Complex 1, New Zealand

Designation: 2018-104J
Catalogue Number: 43857

Nodal period: 94.7
Inclination: 85
Apogee: 523.8
Perigee: 497.8
Orbital position:

General function: Technology Demonstration
Notified to the UN: 08/01/2020

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK Register of
Space Objects:** September 2019

**Licence issued under the
Outer Space Act 1986:** 19 July 2018

Additional information: Decommissioned 11 December 2019

EchoStar 23/EchoStar XXIII

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

Date of launch: 16 March 2017
Location of launch: Cape Canaveral, USA

Designation: 2017-014A
Catalogue Number: 42070

Nodal period: 1,436 minutes
Inclination: 0 degrees
Apogee: 35,796 km
Perigee: 35,776 km
Orbital position: 44.9 E

General function: Communications Satellite
Notified to the UN: 4 July 2017

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: 31 January 2017

Additional information: Relocation to 67.9W 19/08/2019. Change of owner to EchoStar XXIII License Sub Ltd 10 September 2019.

KazEOSat-2

Owner/Operator:	Surrey Satellite Technology Ltd Tycho House 20 Stephenson Road Guildford GU2 7YE
Date of launch:	19 June 2014
Location of launch:	Yasni, Russia
Designation:	2014-033A
Catalogue Number:	40010
Nodal period:	97.2 minutes
Inclination:	97.9 degrees
Apogee:	646.9 km
Perigee:	625.1 km
Orbital position:	N/A
General function:	Earth Observation
Notified to the UN:	N/A (Kazakhstan)
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	01 July 2020
Licence issued under the Outer Space Act 1986:	17 December 2015
Additional information:	Also known as Kazakhstan MRES. UK licenced operations only. Satellite operated and to be registered with the UN by Kazakhstan. Temporary emergency ops licence expired 30 April 2016

PICASSO

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

Date of launch: 03 September 2020
Location of launch: Kourou, French Guiana

Designation: 2020-061K
Catalogue Number: 46281

Nodal period: 95.32
Inclination: 97.52 degrees
Apogee: 539
Perigee: 535
Orbital position: N/A

General function: Earth Observation Satellite
Notified to the UN: 04 September 2020

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: October 2020
Licence issued under the Outer Space Act 1986: 10 June 2020

Additional information: Operations only licence

GIBRALTAR

SATCOM-C4

Owner/Operator: SES Satellites (Gibraltar) Ltd
28 Irish Town
Gibraltar

Date of launch: 31 August 1992
Location of launch: United States

Designation: 1992-057A
Catalogue Number: 22096

Nodal period: 24 hours 13 minutes
Inclination: 2.9 degrees
Apogee: 36,144 km
Perigee: 36,138 km
Orbital position: 105 W

General function: Communications
Notified to the UN: 1 February 1993 – United States

Disposed or decayed: 29 March 2007
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** 6 March 2006
**Licence issued under the
Outer Space Act 1986:** 6 March 2006

Additional information: Satellite originally launched to 135 W and registered by United States. Satellite de-orbited 29 March 2007.

GE SATCOM-1A (NSS-11)

Owner/Operator:	GE Capital Satellites (Gibraltar) Ltd 28 Irish Town Gibraltar
Date of launch:	1 October 2000
Location of launch:	Baikonur, Kazakhstan
Designation:	2000-059A
Catalogue Number:	26554
Nodal period:	23 hours 56 minutes
Inclination:	0 degrees plus or minus 0.1 degrees
Apogee:	35,786.6 km
Perigee:	35,786 km
Orbital position:	108.2 E
General function:	Communications repeater
Notified to the UN:	23 January 2001 – United States
Disposed or decayed:	
Disposal Notified to the UN:	
Accepted onto UK Supplementary Register of Space Objects:	12 October 2000
Licence issued under the Outer Space Act 1986:	29 September 1998
Additional information:	March 2018 - The satellite has been relocated from 108.2 E to 176 E and is commercially known as NSS-11.

SES-7 (Protostar II / Indostar II)

Owner/Operator: SES Satellites (Gibraltar) Ltd
Suite 9A
Leanse Place
50 Town Range
Gibraltar

Date of launch: 16 May 2009
Location of launch: Baikonur, Kazakhstan

Designation: 2009-027A
Catalogue Number: 34941

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 108.2 E

General function: The satellite will carry video and data services.
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 13 April 2010

Additional information:

SES-3

Owner/Operator: SES Satellites (Gibraltar) Ltd
Suite 9A
Leanse Place
50 Town Range
Gibraltar

Date of launch: 15 July 2011
Location of launch: Baikonur, Kazakhstan

Designation: 2011-035A
Catalogue Number: 37748

Nodal period: 1435.8 to 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 108.2 E (please see below)

General function: SES-3 will carry video and data services.
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:** January 2014
**Licence issued under the
Outer Space Act 1986:** 1 February 2012

Additional information: Licence issued to authorise operation of satellite at 108.2 E.
The satellite was drifted out of this orbit on 1 July 2012 and
as such the licence was revoked.

CAYMAN ISLANDS

ZENIT 3 Rocket Booster (DEMOSAT)

Owner/Operator: Sea Launch Company LDC
Windward I
Safehaven Corporate Center
West Bay Road
P.O. Box 10168 APO
Grand Cayman
Cayman Islands
British West Indies

Date of launch: 28 March 1999
Location of launch: Sea Launch vessel, Western Pacific Ocean

Designation: 1999-014B
Catalogue Number: 25662

Nodal period: 642 minutes
Inclination: 1.25 degrees
Apogee: 35,933 km
Perigee: 621 km
Orbital position:

General function: Used to launch demonstration satellite
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

**Accepted onto UK
Supplementary Register of
Space Objects:
Licence issued under the
Outer Space Act 1986:** Launcher exempted from the requirement for a licence –
7 April 1999

Additional information:

ZENIT 3 Rocket Booster (DIRECTV-R1)

Owner/Operator: Sea Launch Company LDC
Windward I
Safehaven Corporate Center
West Bay Road
P.O. Box 10168 APO
Grand Cayman
Cayman Islands
British West Indies

Date of launch: 9 October 1999
Location of launch: Sea Launch vessel, Western Pacific Ocean

Designation: 1999-056B
Catalogue Number: 25938

Nodal period: 678 minutes
Inclination: 0.55 degrees
Apogee: 35,727 km
Perigee: 2,680 km
Orbital position:

General function: Used to launch DIRECTV-1R satellite
Notified to the UN: 7 March 2000 – United States

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects:
Licence issued under the Outer Space Act 1986: Launcher excepted from the requirement for a licence – 5 October 1999

Additional information:

ZENIT 3 Rocket Booster (ICO#1)

Owner/Operator: Sea Launch Company LDC
Windward I
Safehaven Corporate Center
West Bay Road
P.O. Box 10168 APO
Grand Cayman
Cayman Islands
British West Indies

Date of launch: 12 March 2000
Location of launch: Sea Launch vessel, Western Pacific Ocean

Designation: N/A
Catalogue Number: N/A

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

General function: Participating in the launch of ICO#1
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects:
Licence issued under the Outer Space Act 1986: Launcher excepted from the requirement for a licence – 11 March 2000

Additional information: Launch failed

For any enquiries regarding this publication, please contact:

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