

**Secretariat**

Distr.: General
10 August 2021
English
Original: French

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

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

**Note verbale dated 22 March 2021 from the Permanent Mission
of France to the United Nations (Vienna) addressed to the
Secretary-General**

The Permanent Mission of France to the United Nations (Vienna), in accordance with article IV of the Convention on Registration of Objects Launched into Outer Space, and General Assembly resolution 62/101 of 17 December 2007, has the honour to submit the following information on space objects registered by France in 2020.

In 2020, France registered 10 space objects (four satellites, including one Eutelsat satellite, and six launcher elements) in its national registry, which is maintained by the National Centre for Space Studies on behalf of the State, in accordance with articles 12 and 28 of Act No. 2008-518 of 3 June 2008 on space operations, articles 14-1 to 14-6 of Decree No. 84-510 of 28 June 1984 on the National Centre for Space Studies, and the provisions of the Order of 12 August 2011 establishing the list of information needed to identify a space object.

The annexes to the present note contain the following information for 2020:

- Pursuant to article IV, paragraph 1, of the Convention, a list of satellites registered by France (annex I, table 1), a list of space objects registered by France (annex I, table 2) and a list of satellites launched by France on behalf of foreign operators (not registered by France) (annex I, table 3)¹
- Pursuant to article IV, paragraph 3, of the Convention, a list of space objects registered by France that have re-entered the atmosphere (annex II)
- Pursuant to article IV, paragraph 2, of the Convention, additional information held in the national registry of France and relating to satellites operating in low Earth orbit (annex III, table 1), satellites operating in geostationary orbit (annex III, table 2) and satellites that remain in orbit but are no longer operational (annex III, table 3)

As at 31 December 2020, the national registry contained data on 388 space objects, of which 141 were satellites (including 72 operational satellites) and 247 were launcher elements (launcher stages and carrier structures).

¹ The data on space objects referenced in the annexes were entered into the Register of Objects Launched into Outer Space on 16 April 2021.



Of the aforementioned 141 satellites, it should be noted that 49 satellites are catalogued as Eutelsat satellites and that the satellites of the intergovernmental organization Eutelsat are registered by France in accordance with an agreement that remains in force between France and that organization (19 satellites were launched between 1983 and mid-2001).

The second-generation Globalstar satellites, of which there are currently 24, are registered by France in accordance with the Order of 29 August 2011 (article 9).

Annex I

Information on space objects launched by France in 2020*

Table 1
Satellites registered by France in 2020

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Satellites
2020-005B	16 January 2020	CSG	Ariane 5 ECA	1 436.12	0.04	35 789	35 785	Telecommunications	VA251	Eutelsat KONNECT
2020-085M	20 November 2020	Mahia, New Zealand	Electron	94.69	97.38	513	494	Unseenlabs maritime surveillance	-	BRO-2
2020-085Q	20 November 2020	Mahia, New Zealand	Electron	94.7	97.36	514	494	Unseenlabs maritime surveillance	-	BRO-3
2020-104A	29 December 2020	CSG	Soyuz	Sun-synchronous orbit				Earth observation	VS25	CSO 2

Abbreviations: CSG, Guiana Space Centre (Kourou, France).

Table 2
Space objects registered by France in 2020

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object
2020-005C	16 January 2020	CSG	AR5 ECA	626.59	6.020	35 547	208.4	ESC-A cryogenic upper stage	VA251	ESC-A
2020-005D	16 January 2020	CSG	AR5 ECA	633.81	6.026	35 876.8	250.2	SYLDA carrier structure	VA251	SYLDA
2020-013C	18 February 2020	CSG	AR5 ECA	627.81	5.973	35 584.7	233.5	ESC-A cryogenic upper stage	VA252	ESC-A
2020-013D	18 February 2020	CSG	AR5 ECA	633.01	5.981	35 836.3	249.9	SYLDA carrier structure	VA252	SYLDA
2020-056D	15 August 2020	CSG	AR5 ECA	629.69	5.981	35 675.9	239.4	ESC-A cryogenic upper stage	VA253	ESC-A
2020-056E	15 August 2020	CSG	AR5 ECA	633.75	5.984	35 871.9	252.3	SYLDA carrier structure	VA253	SYLDA

Abbreviations: CSG, Guiana Space Centre (Kourou, France).

Note: The VS24, VS25 and VV16 launchers did not leave an object in orbit; flight VV17 failed.

* The data are reproduced in the form in which they were received.

Table 3
Satellites launched by France on behalf of foreign operators (not registered by France) in 2020

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/organization
2020-005A	16 January 2020	CSG	AR5 ECA	1 436.09	0.06	35 793	35 780	Telecommunications satellite	VA251	GSAT 30	India
2020-013A	18 February 2020	CSG	AR5 ECA	1 436.09	6.71	35 802	35 771	Telecommunications satellite	VA252	JCSat 17	Japan
2020-013B	18 February 2020	CSG	AR5 ECA	1 436.12	0.01	35 789	35 784	Telecommunications satellite	VA252	GEO-Kompsat-2B	Republic of Korea
2020-056A	15 August 2020	CSG	AR5 ECA	1 436.09	0.09	35 794	35 778	Telecommunications satellite	VA253	BSAT-4B	Japan
2020-056B	15 August 2020	CSG	AR5 ECA	1 277.11	1.00	41 603	23 626	Satellite maintenance	VA253	MEV-2	United States
2020-056C	15 August 2020	CSG	AR5 ECA	1 422.78	0.02	35 527	35 524	Telecommunications satellite	VA253	Galaxy 30	United States
2020-061A	3 September 2020	CSG	VEGA	94.63	97.39	506	496	Earth observation	VV16	NuSat-6 Hypatia	Argentina
2020-061B	3 September 2020	CSG	VEGA	95.03	97.46	523	517	Earth observation	VV16	ESail	Canada
2020-061C	3 September 2020	CSG	VEGA	95.03	97.46	524	517	Technology demonstration	VV16	ION-Mk01	Italy
2020-061D	3 September 2020	CSG	VEGA	94.98	97.45	518	517	Telecommunications satellite	VV16	Athena	United States
2020-061E	3 September 2020	CSG	VEGA	94.98	97.45	518	517	Technology demonstration	VV16	UPMSat-2	Spain
2020-061F	3 September 2020	CSG	VEGA	94.98	97.45	518	517	Earth observation	VV16	NEMO-HD	Slovenia
2020-061G	3 September 2020	CSG	VEGA	94.96	97.46	518	515	Earth observation	VV16	GHGSat-C1	Canada
2020-061H	3 September 2020	CSG	VEGA	95.37	97.51	539	533	Earth observation	VV16	SIMBA	Belgium
2020-061J	3 September 2020	CSG	VEGA	95.37	97.51	539	534	Earth observation	VV16	TRISAT	Slovenia
2020-061K	3 September 2020	CSG	VEGA	95.36	97.51	539	533	Earth observation	VV16	PICASSO-BEL	Belgium

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/organization
2020-061L	3 September 2020	CSG	VEGA	95.36	97.51	539	534	Earth observation	VV16	Flock 4V 9	United States
2020-061M	3 September 2020	CSG	VEGA	95.36	97.51	538	534	Earth observation	VV16	Flock 4V 12	United States
2020-061N	3 September 2020	CSG	VEGA	95.36	97.51	539	534	Scientific satellite	VV16	DIDO 3	Israel
2020-061P	3 September 2020	CSG	VEGA	95.36	97.51	539	534	Earth observation	VV16	Flock 4V 11	United States
2020-061Q	3 September 2020	CSG	VEGA	95.36	97.51	538	534	Earth observation	VV16	Flock 4V 14	United States
2020-061R	3 September 2020	CSG	VEGA	95.36	97.51	538	534	Earth observation	VV16	AMICALSAT	Commonwealth of Independent States
2020-061S	3 September 2020	CSG	VEGA	95.36	97.51	538	534	Earth observation	VV16	Flock 4V 8	United States
2020-061T	3 September 2020	CSG	VEGA	95.35	97.51	538	534	Earth observation	VV16	Flock 4V 6	United States
2020-061U	3 September 2020	CSG	VEGA	95.35	97.51	538	534	Earth observation	VV16	Flock 4V 5	United States
2020-061V	3 September 2020	CSG	VEGA	95.35	97.51	538	534	Earth observation	VV16	Flock 4V 7	United States
2020-061W	3 September 2020	CSG	VEGA	95.35	97.51	537	533	Earth observation	VV16	3CAT-5/A (Tyvak-0161)	Spain
2020-061X	3 September 2020	CSG	VEGA	95.34	97.51	537	533	Earth observation	VV16	3CAT-5/B (Tyvak-0162)	Spain
2020-061Y	3 September 2020	CSG	VEGA	95.33	97.51	536	533	Earth observation	VV16	OSM-1 CICERO	To be determined ^a
2020-061Z	3 September 2020	CSG	VEGA	95.33	97.51	536	533	Information not provided	VV16	Tyvak-0171	Australia
2020-061AA	3 September 2020	CSG	VEGA	95.33	97.51	535	534	Earth observation	VV16	Flock 4V 10	United States
2020-061AB	3 September 2020	CSG	VEGA	95.33	97.51	535	534	Earth observation	VV16	Flock 4V 13	United States
2020-061AC	3 September 2020	CSG	VEGA	95.30	97.51	534	533	Telecommunications satellite	VV16	Lemur 2 EthanOakes	United States
2020-061AD	3 September 2020	CSG	VEGA	95.30	97.51	534	533	Telecommunications satellite	VV16	Lemur 2 Oscarlator	United States

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/organization
2020-061AE	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-21	United States
2020-061AF	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-20	United States
2020-061AG	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-15	United States
2020-061AH	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-19	United States
2020-061AJ	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-18	United States
2020-061AK	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-10	United States
2020-061AL	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-17	United States
2020-061AM	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-11	United States
2020-061AN	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-16	United States
2020-061AP	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-12	United States
2020-061AQ	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-13	United States
2020-061AR	3 September 2020	CSG	VEGA	95.29	97.51	533	532	Telecommunications satellite	VV16	SpaceBEE-14	United States
2020-061AS	3 September 2020	CSG	VEGA	95.30	97.51	534	532	Earth observation	VV16	TTU100	Estonia
2020-061AT	3 September 2020	CSG	VEGA	95.30	97.51	534	532	Earth observation	VV16	Flock 4V 1	United States
2020-061AU	3 September 2020	CSG	VEGA	95.30	97.51	534	532	Earth observation	VV16	Flock 4V 4	United States
2020-061AV	3 September 2020	CSG	VEGA	95.28	97.51	533	531	Telecommunications satellite	VV16	Lemur 2 SchmidtFall	United States
2020-061AW	3 September 2020	CSG	VEGA	95.28	97.51	533	531	Telecommunications satellite	VV16	Lemur 2 Djuproera	United States
2020-061AX	3 September 2020	CSG	VEGA	95.28	97.51	533	531	Telecommunications satellite	VV16	Lemur 2 Squarejaws	United States

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/ organization
2020-061AY	3 September 2020	CSG	VEGA	95.28	97.51	533	531	Telecommunications satellite	VV16	Lemur 2 Ursa Avion	United States
2020-061AZ	3 September 2020	CSG	VEGA	95.29	97.51	534	532	Telecommunications satellite	VV16	Kepler-2 (TARS)	Canada
2020-061BA	3 September 2020	CSG	VEGA	95.29	97.51	534	531	Earth observation	VV16	Napa-1	Thailand
2020-061BB	3 September 2020	CSG	VEGA	95.30	97.51	534	532	Earth observation	VV16	Flock 4V 2	United States
2020-061BC	3 September 2020	CSG	VEGA	95.30	97.51	534	532	Earth observation	VV16	Flock 4V 3	United States
2020-061BD	3 September 2020	CSG	VEGA	95.07	97.46	527	516	Technology demonstration	VV16	Flock 4V 16	United States
2020-061BE	3 September 2020	CSG	VEGA	94.97	97.46	518	516	Technology demonstration	VV16	Flock 4V 15	United States
2020-061BF	3 September 2020	CSG	VEGA	94.98	97.45	519	516	Technology demonstration	VV16	Flock 4V 17	United States
2020-061BK	3 September 2020	CSG	VEGA	95.00	97.45	521	516	Technology demonstration	VV16	Flock 4V 21	United States
2020-061BG	3 September 2020	CSG	VEGA	95.05	97.47	525	516	Technology demonstration	VV16	Flock 4V 18	United States
2020-061BH	3 September 2020	CSG	VEGA	94.99	97.45	520	516	Technology demonstration	VV16	Flock 4V 19	United States
2020-061BJ	3 September 2020	CSG	VEGA	95.05	97.46	526	516	Technology demonstration	VV16	Flock 4V 20	United States
2020-061BL	3 September 2020	CSG	VEGA	95.02	97.45	523	516	Technology demonstration	VV16	Flock 4V 22	United States
2020-061BM	3 September 2020	CSG	VEGA	95.00	97.45	522	516	Technology demonstration	VV16	Flock 4V 23	United States
2020-061BN	3 September 2020	CSG	VEGA	95.05	97.47	525	517	Technology demonstration	VV16	Flock 4V 24	United States
2020-061BP	3 September 2020	CSG	VEGA	94.99	97.45	522	515	Technology demonstration	VV16	Flock 4V 25	United States
2020-061BQ	3 September 2020	CSG	VEGA	95.05	97.47	525	517	Technology demonstration	VV16	Flock 4V 26	United States

International designator	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/ organization
2020-090A	2 December 2020	CSG	Soyuz ST-A	96.98	97.87	615	613	Earth observation	VS24	Falcon Eye 2	United Arab Emirates

Abbreviations: CSG, Guiana Space Centre (Kourou, France).
^a OSM-1 CICERO, the first Monegasque satellite, is listed without any country information under reference Tyvak-0088 on Space-Track.

Annex II

Information provided by France in conformity with article IV, paragraph 3, of the Convention on Registration of Objects Launched into Outer Space on space objects registered by France that re-entered the Earth's atmosphere in 2020*

<i>International designator</i>	<i>Date of the launch</i>	<i>General function of the space object</i>	<i>Date of atmospheric re-entry</i>
2009-054D	30 September 2009	SYLDA Ariane 5	14 January 2020
2016-004C	27 January 2016	Ariane 5 debris	22 January 2020
2010-021D	21 May 2010	SYLDA Ariane 5	14 February 2020
2015-054D	30 September 2015	SYLDA Ariane 5	20 February 2020
2005-046D	16 November 2005	SYLDA Ariane 5	3 May 2020
1986-019BB	22 February 1989	Ariane 1 debris	29 May 2020
1992-021C	15 April 1992	Ariane 44L+ stage	2 October 2020
2016-082D	21 December 2016	SYLDA Ariane 5	29 September 2020
1991-015H	2 March 1991	Ariane 44L stage	6 November 2020

Note: These data do not include re-entering debris generated by objects that remain in orbit or that had previously re-entered the atmosphere.

* The registration data are reproduced in the form in which they were received.

Annex III

**Additional information provided by France in conformity with article IV, paragraph 2,
of the Convention on Registration of Objects Launched into Outer Space on space objects
registered by France as at 31 December 2020***

Table 1
Satellites registered by France and operating in low Earth orbit

<i>No.</i>	<i>Registration number</i>	<i>Satellite</i>	<i>Type of orbit</i>
1.	2004-049A	HELIOS 2A space observation satellite	Polar orbit
2.	2006-016B	CALIPSO satellite for three-dimensional characterization of clouds and aerosols	700 km polar orbit
3.	2009-073A	HELIOS 2B space observation satellite	Polar orbit
4.	2010-054A	Globalstar M079 communication satellite	1,400 km orbit inclined at 52°
5.	2010-054B	Globalstar M074 communication satellite	1,400 km orbit inclined at 52°
6.	2010-054C	Globalstar M076 communication satellite	1,400 km orbit inclined at 52°
7.	2010-054D	Globalstar M077 communication satellite	1,400 km orbit inclined at 52°
8.	2010-054E	Globalstar M075 communication satellite	1,400 km orbit inclined at 52°
9.	2010-054F	Globalstar M073 communication satellite	1,400 km orbit inclined at 52°
10.	2011-033A	Globalstar M083 communication satellite	1,400 km orbit inclined at 52°
11.	2011-033B	Globalstar M088 communication satellite	1,400 km orbit inclined at 52°
12.	2011-033C	Globalstar M091 communication satellite	1,400 km orbit inclined at 52°
13.	2011-033D	Globalstar M085 communication satellite	1,400 km orbit inclined at 52°
14.	2011-033E	Globalstar M081 communication satellite	1,400 km orbit inclined at 52°
15.	2011-033F	Globalstar M089 communication satellite	1,400 km orbit inclined at 52°
16.	2011-076A	ELISA W11 listening system microsatellite	Polar orbit
17.	2011-076B	ELISA E24 listening system microsatellite	Polar orbit
18.	2011-076C	ELISA W23 listening system microsatellite	Polar orbit
19.	2011-076D	ELISA E12 listening system microsatellite	Polar orbit
20.	2011-076F	PLEIADES-1A Earth observation satellite	700 km polar orbit

* The registration data are reproduced in the form in which they were received.

<i>No.</i>	<i>Registration number</i>	<i>Satellite</i>	<i>Type of orbit</i>
21.	2011-080A	Globalstar M084 communication satellite	1,400 km orbit inclined at 52°
22.	2011-080B	Globalstar M080 communication satellite	1,400 km orbit inclined at 52°
23.	2011-080C	Globalstar M082 communication satellite	1,400 km orbit inclined at 52°
24.	2011-080D	Globalstar M092 communication satellite	1,400 km orbit inclined at 52°
25.	2011-080E	Globalstar M090 communication satellite	1,400 km orbit inclined at 52°
26.	2011-080F	Globalstar M086 communication satellite	1,400 km orbit inclined at 52°
27.	2012-047A	SPOT 6 Earth observation satellite	700 km polar orbit
28.	2012-068A	PLEIADES-1B Earth observation satellite	700 km polar orbit
29.	2013-005A	Globalstar M097 communication satellite	1,400 km orbit inclined at 52°
30.	2013-005B	Globalstar M093 communication satellite	1,400 km orbit inclined at 52°
31.	2013-005C	Globalstar M094 communication satellite	1,400 km orbit inclined at 52°
32.	2013-005D	Globalstar M096 communication satellite	1,400 km orbit inclined at 52°
33.	2013-005E	Globalstar M078 communication satellite	1,400 km orbit inclined at 52°
34.	2013-005F	Globalstar M095 communication satellite	1,400 km orbit inclined at 52°
35.	2017-036AD	Robusta 1B	505 km orbit inclined at 97°
36.	2018-106A	CSO-1	Polar orbit
37.	2019-054A	BRO-1	540 km orbit inclined at 45°
38.	2019-038K ^a	ROBUSTA 1C (“Object K”)	530 km polar orbit
39.	2019-092D	ANGELS	500 km polar orbit
40.	2019-092E	EYESAT	500 km polar orbit
41.	2020-085M	BRO-2	513 km orbit inclined at 97°
42.	2020-085Q	BRO-3	514 km orbit inclined at 97°
43.	2020-104A	CSO-2	Polar orbit

Note: Bold font shows additions made in 2020.

^a ROBUSTA 1C university CubeSat is likely to be the object catalogued as 2019-038-K by Space-Track.

Table 2
Satellites registered by France and operating in geostationary orbit

<i>No.</i>	<i>Registration number</i>	<i>Satellite</i>	<i>Orbital position</i>
1.	2000-028A	Eutelsat 48 E telecommunications satellite (formerly Eutelsat 70 E, Eutelsat 12 West C, Eutelsat 80A, Eutelsat 88A, Eutelsat 70C and Eutelsat 36A)	48° E

<i>No.</i>	<i>Registration number</i>	<i>Satellite</i>	<i>Orbital position</i>
2.	2001-011A	Eutelsat 133 WA telecommunications satellite (formerly Eutelsat 33C, Eutelsat 28A and Eurobird 1)	-132.85° E
3.	2002-035A	Eutelsat 5 West A telecommunications satellite (formerly Atlantic Bird 3)	5° W
4.	2004-008A	Eutelsat 7A telecommunications satellite (formerly W3A)	7° E
5.	2005-041B	Syracuse 3A telecommunications satellite	47° E
6.	2006-007B	HOTBIRD 13E telecommunications satellite (formerly Eutelsat 9A, Eurobird 9A and Hot Bird 7A)	13° E
7.	2006-032A	Eutelsat Hot Bird 13B telecommunications satellite (formerly Hot Bird 8)	13° E
8.	2006-033B	Syracuse 3B telecommunications satellite	5° W
9.	2008-065A	Eutelsat Hot Bird 13C telecommunications satellite (formerly Hot Bird 9)	13° E
10.	2008-065B	Eutelsat 48D telecommunications satellite (formerly 28B, Eutelsat 48B and W2M)	48.1° E
11.	2009-008B	Eutelsat 33E telecommunications satellite (formerly Eutelsat Hotbird 13D, Eutelsat 3C, Atlantic Bird 4A and Hot Bird 10)	33.1° E
12.	2009-016A	Eutelsat 10A telecommunications satellite (formerly W2A)	10° E
13.	2009-065A	Eutelsat 36B telecommunications satellite (formerly W7)	35.9° E
14.	2010-069A	Eutelsat KA-SAT 9A telecommunications satellite (formerly KA-SAT)	9° E
15.	2011-051A	Eutelsat 7 West A telecommunications satellite (formerly Atlantic Bird 7)	7.3° W
16.	2011-057A	Eutelsat 16A telecommunications satellite (formerly W3C)	16° E
17.	2012-062B	Eutelsat 21B telecommunications satellite (formerly W6A)	21.5° E
18.	2012-069A	Eutelsat 70B telecommunications satellite (formerly W5A)	70.5° E
19.	2013-022A	Eutelsat 7B telecommunications satellite (3D (formerly W3D))	7° E
20.	2013-044A	Eutelsat Es'hail1 (QAT) telecommunications satellite (formerly 25B and EB 2A)	25.5° E
21.	2014-006B	Athena-Fidus telecommunications satellite	25° E
22.	2014-030A	Eutelsat 3B telecommunications satellite	3.1° E
23.	2015-039B	Eutelsat 8 West B telecommunications satellite	8° W
24.	2016-005A	Eutelsat 9B telecommunications satellite	9° E
25.	2016-014A	Eutelsat 65WA telecommunications satellite	65° W
26.	2017-029B	Eutelsat 172B telecommunications satellite	172° E
27.	2019-034B	Eutelsat 7C telecommunications satellite	7° E
28.	2019-067A	Eutelsat 5WB telecommunications satellite	5° W
29.	2020-005B	Eutelsat KONNECT telecommunications satellite	7.2° E

Note: Bold font shows additions made in 2020.

Table 3
Satellites registered by France that remain in orbit but are no longer operational

No.	Registration number	Satellite	Orbit
1.	1965-096A	A1 experimental satellite (Astérix)	Low Earth orbit (LEO)
2.	1965-101A	FR1 technological satellite	LEO
3.	1966-013A	Diapason D1 experimental satellite	LEO
4.	1967-011A	Diadème 1 experimental satellite	LEO
5.	1967-014A	Diadème 2 experimental satellite	LEO
6.	1971-071A	EOLE 1 (CAS-A) experimental data-collection satellite	LEO
7.	1974-101A	Symphonie 1 experimental telecommunications satellite	Geostationary Earth orbit (GEO)
8.	1975-010A	Starlette scientific satellite	LEO
9.	1975-077A	Symphonie 2 experimental telecommunications satellite	GEO
10.	1983-058A	Eutelsat I F1 telecommunications satellite (ECS 1, ESA)	GEO
11.	1984-081A	Eutelsat I F2 telecommunications satellite (ECS 2, ESA)	GEO
12.	1984-081B	TELECOM 1A telecommunications satellite	GEO
13.	1985-035B	TELECOM 1B telecommunications satellite	GEO
14.	1986-019A	SPOT 1 Earth observation satellite (deorbiting manoeuvres effected in November 2003 to lower the satellite's perigee to below 600 km with a view to achieving re-entry within 25 years)	LEO
15.	1987-078B	Eutelsat I F4 telecommunications satellite (ECS 4)	GEO
16.	1988-018B	TELECOM 1C telecommunications satellite	GEO
17.	1988-063B	Eutelsat I F5 telecommunications satellite (ECS 5, ESA)	GEO
18.	1988-098A	TDF1 live television satellite	GEO
19.	1990-005A	SPOT 2 Earth observation satellite (final deorbiting manoeuvres effected on 29 July 2009 to lower the satellite's perigee to below 600 km with a view to achieving re-entry within 25 years)	LEO
20.	1990-063A	TDF2 live television satellite	GEO
21.	1990-079B	Eutelsat II F1 telecommunications satellite	GEO
22.	1991-003B	Eutelsat II F2 telecommunications satellite	GEO
23.	1991-050E	Satellite for Amateur Radio Astronomy (SARA)	LEO
24.	1991-083A	Eutelsat II F3 telecommunications satellite	GEO
25.	1991-084A	TELECOM 2A telecommunications satellite	GEO
26.	1992-021A	TELECOM 2B telecommunications satellite	GEO
27.	1992-041B	Eutelsat II F4 telecommunications satellite	GEO
28.	1992-052C	S80/T technological satellite	LEO

<i>No.</i>	<i>Registration number</i>	<i>Satellite</i>	<i>Orbit</i>
29.	1993-031B	ARSENE amateur radio satellite (perigee ~17,000 km)	Geostationary transfer orbit (GTO)
30.	1993-061A	SPOT 3 Earth observation satellite (> 800 km)	LEO
31.	1993-061B	STELLA scientific satellite (800 km)	LEO
32.	1995-016B	Hot Bird 1 telecommunications satellite (Eutelsat II F6)	GEO
33.	1995-033A	HELIOS 1A observation satellite (deactivated in February 2012 following deorbiting manoeuvres)	LEO
34.	1995-033B	CERISE research satellite (~600 km)	LEO
35.	1995-067A	TELECOM 2C telecommunications satellite	GEO
36.	1996-044B	TELECOM 2D telecommunications satellite (deactivated in November 2012 following deorbiting manoeuvres)	GEO
37.	1996-067A	Eutelsat 48A telecommunications satellite (formerly W48, Eurobird 9 and Hot Bird 2)	GEO
38.	1997-049A	W75 telecommunications satellite (formerly Eurobird 4 and Hot Bird 3) (deactivated in July 2011 following deorbiting manoeuvres)	GEO
39.	1998-013A	Eutelsat 16B telecommunications satellite (formerly Eurobird 16 and Hot Bird 4)	GEO
40.	1998-017A	SPOT 4 Earth observation satellite, 820 km sun-synchronous orbit (ceased operating on 29 June 2013)	LEO
41.	1998-056A	Eutelsat W2 telecommunications satellite (deactivated in March 2010 following deorbiting manoeuvres)	GEO
42.	1998-057A	Eutelsat 25A telecommunications satellite (formerly Eurobird 2 and Hot Bird 5), redeployed and renamed Eutelsat 4B in 2013 (deactivated in September 2013 following deorbiting manoeuvres)	GEO
43.	1999-018A	Eutelsat 21A telecommunications satellite (formerly W6 and W3), redeployed and renamed Eutelsat 48C in 2013 (decommissioned on 9 November 2014)	GEO
44.	1999-064A	HELIOS 1B space observation satellite (ceased operating on 21 October 2004; perigee ~630 km)	LEO
45.	1999-064B	Clémentine experimental satellite (perigee ~600 km)	LEO
46.	2000-052A	Eurobird 4A telecommunications satellite (formerly W1) (deactivated in February 2012 following deorbiting manoeuvres)	GEO
47.	2001-055A	French-American Jason 1 oceanography satellite (orbit inclined at 66°; mission ended on 3 July 2013)	LEO
48.	2002-021A	SPOT 5 Earth observation satellite (820 km sun-synchronous orbit)	LEO
49.	2002-021B	IDEFIX amateur radio satellite (attached to third stage of Ariane 4-V151; orbit ~800 km)	LEO
50.	2002-038A	Eutelsat 70D telecommunications satellite (formerly Hot Bird 13A), decommissioned on 7 August 2016	GEO
51.	2002-051A	Eutelsat 70A telecommunications satellite (formerly W5), redeployed and renamed Eutelsat 25C in 2013, then Eutelsat 33B)	GEO
52.	2004-025C	DEMETER scientific microsatellite (scientific use terminated in December 2010; deactivated in February 2011; 650 km)	LEO
53.	2004-049C	ESSAIM 1 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO

No.	Registration number	Satellite	Orbit
54.	2004-049D	ESSAIM 2 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
55.	2004-049E	ESSAIM 3 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
56.	2004-049F	ESSAIM 4 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
57.	2004-049G	Polarization and Anisotropy of Reflectances for Atmospheric Sciences coupled with Observations from a Lidar (PARASOL) microsatellite for characterization of the radiative and microphysical properties of clouds and aerosols; 700 km polar orbit (ceased operating on 18 December 2013)	LEO
58.	2006-063A	Convection, Rotation and Planetary Transits (COROT) satellite for the study of stars and exoplanet detection (end of lifetime on 17 June 2014)	LEO
59.	2009-008C	Spirale A experimental satellite (deactivated early 2011)	GTO
60.	2009-008D	Spirale B experimental satellite (deactivated early 2011)	GTO
61.	2010-028A	PICARD microsatellite for solar research (end of lifetime on 4 April 2014)	LEO
62.	2010-056A	Eutelsat W3B telecommunications satellite (failed launch into geostationary orbit. In GTO)	GTO
63.	2016-025B	MICROSCOPE scientific satellite	LEO
64.	2000-019A	Eutelsat 16C telecommunications satellite (formerly SESAT 1)	GEO
65.	2002-040A	Eutelsat 59 A telecommunications satellite (formerly Eutelsat 36WA, Eutelsat 12 WA and Atlantic Bird 1)	GEO
66.	2003-043A	Eutelsat 31 A telecommunications satellite (formerly 33A, Eurobird 3 and e-Bird)	GEO
67.	2018-004X	PICSAT (launched in January 2018 and lost in March 2018)	LEO
68.	2008-032A	French-American JASON 2 oceanography satellite	LEO
69.	2001-042A	Eutelsat E12WB (moved to a graveyard orbit on 6 October 2020. Deorbiting manoeuvres commenced on 6 October 2020)	GEO

Note: Bold font shows additions made in 2020.