



---

**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 28 February 2013 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 (General Assembly resolution 3235 (XXIX), annex), has the honour to submit information on space objects launched by France between 1 January and 31 December 2012 (annex I), information on space objects registered by France that re-entered the Earth's atmosphere between 1 January and 31 December 2012 (annex II) and additional information on space objects registered by France (annex III).

The Permanent Mission of France also has the honour to inform the Secretary-General that, in accordance with the decision made by France in 2011, the second-generation Globalstar satellites, launched as from October 2010, will be registered by France. A total of 18 Globalstar-2 satellites have been launched to date.

The Permanent Mission of France further has the honour to inform the Secretary-General that the French National Registry of Objects Launched into Outer Space contained 305 space objects as at the end of 2012. Of those objects, 114 were satellites (of which 63 were operational) and 191 were component parts of launchers, such as launcher stages and carrier structures.



## Annex I

## Information on space objects launched by France\*

## A. Registration data on satellites launched by France between 1 January and 31 December 2012

Registration number	Date of launch	Launch site	Name of the launcher	Basic orbital characteristics					Remarks		
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of the space object	Launch number	Launched space objects	State/organization
2012-006 (D, G, H and J)	13 February	Kourou, French Guiana	Vettore Europeo di Generazione Avanzata (VEGA)	100	69	1 266	303	University CubeSat	V01	ROBUSTA	France
2012-047A	9 September	Sriharikota, India	PSLV	99	98	699	697	Observation satellite	-	SPOT 6	France
2012-062B	10 November	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 796	35 776	Telecommunications satellite	A210	EUTELSAT 21B	France
2012-068A	2 December	Kourou, French Guiana	Soyuz ST-A	99	98	699	697	Observation satellite	S04	Pleiades 1B	France
2012-069A	3 December	Sea launch (international waters)	Zenith-3	1 428	0	35 639	35 622	Telecommunications satellite	-	EUTELSAT 70B	France

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

## B. Registration data on other space objects launched by France between 1 January and 31 December 2012

Registration number	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				Remarks			
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of the space object	Launch number	Launched space objects	State/organization
2012-023C	15 May	Kourou, French Guiana	Ariane 5 ECA	627	2	35 542	252	ESC-A cryogenic upper stage	A206	ESC-A	France
2012-023D	15 May	Kourou, French Guiana	Ariane 5 ECA	603	2	34 270	235	SYLDA carrier structure	A206	SYLDA	France
2012-035C	5 July	Kourou, French Guiana	Ariane 5 ECA	629	7	35 615	264	ESC-A cryogenic upper stage	A207	ESC-A	France
2012-035D	5 July	Kourou, French Guiana	Ariane 5 ECA	623	6	35 301	265	SYLDA carrier structure	A207	SYLDA	France
2012-043C	2 August	Kourou, French Guiana	Ariane 5 ECA	629	6	35 612	267	ESC-A cryogenic upper stage	A208	ESC-A	France
2012-043D	2 August	Kourou, French Guiana	Ariane 5 ECA	619	6	35 116	256	SYLDA carrier structure	A208	SYLDA	France
2012-051C	28 September	Kourou, French Guiana	Ariane 5 ECA	629	6	35 624	268	ESC-A cryogenic upper stage	A209	ESC-A	France
2012-051D	28 September	Kourou, French Guiana	Ariane 5 ECA	623	6	35 325	257	SYLDA carrier structure	A209	SYLDA	France
2012-055C	12 October	Kourou, French Guiana	Soyuz ST-B	864	55	23 689	23 644	Fregat stage/Galileo adaptor	S03	Fregat	France
2012-062C	10 November	Kourou, French Guiana	Ariane 5 ECA	630	2	35 689	261	ESC-A cryogenic upper stage	A210	ESC-A	France
2012-062D	10 November	Kourou, French Guiana	Ariane 5 ECA	628	2	35 561	262	SYLDA carrier structure	A210	SYLDA	France
2012-075C	19 December	Kourou, French Guiana	Ariane 5 ECA	631	2	35 720	263	ESC-A cryogenic upper stage	A211	ESC-A	France
2012-075D	19 December	Kourou, French Guiana	Ariane 5 ECA	630	2	35 676	264	SYLDA carrier structure	A211	SYLDA	France

### C. Space objects operated by foreign satellite operators that were launched by France between 1 January and 31 December 2012

Note: These space objects are not registered by France.

Registration number	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics					Remarks		
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of the space object	Launch number	Launched space objects	State/organization
2012-006A	13 February	Kourou, French Guiana	VEGA	115	69	1 451	1 437	Passive scientific minisatellite	V01	Laser Relativity Satellite (LARES)	Italy
2012-006B	13 February	Kourou, French Guiana	VEGA	102	69	1 356	310	Demonstration microsatellite	V01	Alma Mater Satellite (ALMASAT)-1	Italy
2012-006C	13 February	Kourou, French Guiana	VEGA	101	69	1 270	303	CubeSat	V01	E-Star	Italy
2012-006 (D, G, H and J)	13 February	Kourou, French Guiana	VEGA	101	69	1 267	305	CubeSat	V01	UniCubeSat	Italy
2012-006E	13 February	Kourou, French Guiana	VEGA	101	69	1 269	304	CubeSat	V01	MaSat-1	Hungary
2012-006F	13 February	Kourou, French Guiana	VEGA	100	69	1 236	303	CubeSat	V01	XaTcobero	Spain
2012-006 (D, G, H and J)	13 February	Kourou, French Guiana	VEGA	100	69	1 251	304	CubeSat	V01	PW-SAT	Poland
2012-006 (D, G, H and J)	13 February	Kourou, French Guiana	VEGA	101	69	1 276	303	CubeSat	V01	Goliat	Romania
2012-010A	23 March	Kourou, French Guiana	Ariane 5 ECA	-	-	-	-	Automated Transfer Vehicle, re-entered 30 October 2012	A205	ATV-3	European Space Agency (ESA)
2012-023A	15 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 796	35 778	Telecommunications satellite	A206	JCSAT 13	Japan
2012-023B	15 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 796	35 778	Telecommunications satellite	A206	Vinasat 2	Viet Nam

Registration number	Date of the launch	Basic orbital characteristics						Remarks			
		Launch site	Name of the launcher	Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of the space object	Launch number	Launched space objects	State/organization
2012-035A	5 July	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 793	35 780	Telecommunications satellite	A207	EchoStar 17	United States of America
2012-035B	5 July	Kourou, French Guiana	Ariane 5 ECA	1 436	1	35 788	35 782	Telecommunications satellite	A207	MSG 3	EUMETSAT
2012-043A	2 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 795	35 777	Telecommunications satellite	A208	INTELSAT 20	Luxembourg
2012-043B	2 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 794	35 777	Telecommunications satellite	A208	Highly Adaptable Satellite (HYLAS) 2	United Kingdom of Great Britain and Northern Ireland
2012-051A	28 September	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 802	35 771	Telecommunications satellite	A209	Astra 2F	Luxembourg
2012-051B	28 September	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 796	35 777	Telecommunications satellite	A209	GSAT 10	India
2012-055A	12 October	Kourou, French Guiana	Soyuz ST-B	845	55	23 224	23 220	European radio-positioning satellite	S03	Galileo-FM3	ESA
2012-055B	12 October	Kourou, French Guiana	Soyuz ST-B	845	55	23 223	23 221	European radio-positioning satellite	S03	Galileo-FM4	ESA
2012-062A	10 November	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 798	35 776	Telecommunications satellite	A210	Star One C3	Brazil
2012-075A	19 December	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 801	35 773	Telecommunications satellite	A211	Skynet 5D	United Kingdom
2012-075B	19 December	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 794	35 780	Telecommunications satellite (Mexsat 3)	A211	Mexsat Bicentenario	Mexico

## 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 between 1 January and 31 December 2012\*

<i>Registration number</i>	<i>Date of the launch</i>	<i>General junction of the space object</i>	<i>Date of atmospheric re-entry</i>
1991-055B	14 August 1991	Ariane 4 stage	4 January 2012
1997-016C	16 April 1997	Ariane 4 stage	22 February 2012
1998-056C	5 October 1998	Ariane 4 stage	8 July 2012
2001-029C	12 July 2001	Ariane 5 stage	22 November 2012

---

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

**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\***

Table 1  
**French satellites in a low Earth orbit and still operational**

No.	Registration number	Satellite	Type of orbit
1.	1998-017A	SPOT 4 Earth observation satellite	820 km sun-synchronous
2.	2001-055A	French-American Jason-1 oceanography satellite	1,330 km orbit inclined at 66°
3.	2002-021A	SPOT 5 Earth observation satellite	820 km sun-synchronous
4.	2004-049A	Helios 2A observation satellite	Polar orbit
5.	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
6.	2006-016B	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite for three-dimensional characterization of clouds and aerosols	700 km polar orbit
7.	2006-063A	Convection, Rotation and Planetary Transits (COROT) satellite for the study of stars and exoplanet detection	900 km polar orbit
8.	2008-032A	French-American Jason-2 oceanography satellite	1,330 km orbit inclined at 66°
9.	2009-073A	Helios 2B observation satellite	Polar orbit
10.	2010-028A	Picard microsatellite for solar research	730 km polar orbit
11.	2010-054A	Globalstar M079 communications satellite	1,400 km orbit inclined at 52°
12.	2010-054B	Globalstar M074 communications satellite	1,400 km orbit inclined at 52°
13.	2010-054C	Globalstar M076 communications satellite	1,400 km orbit inclined at 52°
14.	2010-054D	Globalstar M077 communications satellite	1,400 km orbit inclined at 52°
15.	2010-054E	Globalstar M075 communications satellite	1,400 km orbit inclined at 52°
16.	2010-054F	Globalstar M073 communications satellite	1,400 km orbit inclined at 52°
17.	2011-033A	Globalstar M083 communications satellite	1,400 km orbit inclined at 52°
18.	2011-033B	Globalstar M088 communications satellite	1,400 km orbit inclined at 52°

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

No.	Registration number	Satellite	Type of orbit
19.	2011-033C	Globalstar M091 communications satellite	1,400 km orbit inclined at 52°
20.	2011-033D	Globalstar M085 communications satellite	1,400 km orbit inclined at 52°
21.	2011-033E	Globalstar M081 communications satellite	1,400 km orbit inclined at 52°
22.	2011-033F	Globalstar M089 communications satellite	1,400 km orbit inclined at 52°
23.	2011-076A	ELISA W11 listening system microsatellite	Polar orbit
24.	2011-076B	ELISA E24 listening system microsatellite	Polar orbit
25.	2011-076C	ELISA W23 listening system microsatellite	Polar orbit
26.	2011-076D	ELISA E12 listening system microsatellite	Polar orbit
27.	2011-076F	Pleiades 1A Earth observation satellite	700 km polar orbit
28.	2011-080A	Globalstar M084 communications satellite	1,400 km orbit inclined at 52°
29.	2011-080B	Globalstar M080 communications satellite	1,400 km orbit inclined at 52°
30.	2011-080C	Globalstar M082 communications satellite	1,400 km orbit inclined at 52°
31.	2011-080D	Globalstar M092 communications satellite	1,400 km orbit inclined at 52°
32.	2011-080E	Globalstar M090 communications satellite	1,400 km orbit inclined at 52°
33.	2011-080F	Globalstar M086 communications satellite	1,400 km orbit inclined at 52°
34.	2012-047A	SPOT 6 Earth observation satellite	700 km polar orbit
35.	2012-068A	Pleiades 1B Earth observation satellite	700 km polar orbit



Table 2  
**French satellites in geostationary orbit and still operational, with approximate orbital positions**

No.	Registration number	Satellite	Orbital position
1.	1996-067A	EUTELSAT 48A telecommunications satellite (formerly W48, Eurobird™ 9, Hot Bird™ 2)	48° E
2.	1998-013A	EUTELSAT 16B telecommunications satellite (formerly Eurobird™ 16, Hot Bird™ 4)	16° E
3.	1998-057A	EUTELSAT 25A telecommunications satellite (formerly Eurobird™ 2, Hot Bird™ 5)	25.5° E
4.	1999-018A	EUTELSAT 21A telecommunications satellite (formerly W6, W3)	21.5° E
5.	2000-019A	EUTELSAT 16C telecommunications satellite (formerly SESAT 1)	16° E
6.	2000-028A	EUTELSAT 36A telecommunications satellite (formerly W4)	36° E
7.	2001-011A	EUTELSAT 28A telecommunications satellite (formerly Eurobird™ 1)	28.5° E
8.	2001-042A	EUTELSAT 8 West A telecommunications satellite (formerly Atlantic Bird™ 2)	8° W
9.	2002-035A	EUTELSAT 5 West A telecommunications satellite (formerly Atlantic Bird™ 3)	5° W
10.	2002-038A	EUTELSAT Hot Bird™ 13A telecommunications satellite (formerly Hot Bird™ 6)	13° E
11.	2002-040A	EUTELSAT 12 West A telecommunications satellite (formerly Atlantic Bird™ 1)	12.5° W
12.	2002-051A	EUTELSAT 70A telecommunications satellite (formerly W5)	70.5° E
13.	2003-043A	EUTELSAT 33A telecommunications satellite (formerly Eurobird™ 3, eBird™)	33° E
14.	2004-008A	EUTELSAT 7A telecommunications satellite (formerly W3A)	7° E
15.	2005-041B	Syracuse 3A telecommunications satellite	47° E
16.	2006-007B	EUTELSAT 9A telecommunications satellite (formerly Eurobird™ 9A, Hot Bird™ 7A)	9° E
17.	2006-032A	EUTELSAT Hot Bird™ 13B telecommunications satellite (formerly Hot Bird™ 8)	13° E
18.	2006-033B	Syracuse 3B telecommunications satellite	5° W
19.	2008-065A	EUTELSAT Hot Bird™ 13C telecommunications satellite (formerly Hot Bird™ 9)	13° E
20.	2008-065B	EUTELSAT 28B telecommunications satellite (formerly EUTELSAT 48B, W2M)	28.5° E
21.	2009-008B	EUTELSAT 3C telecommunications satellite (formerly Atlantic Bird™ 4A, Hot Bird™ 10)	3° E
22.	2009-016A	EUTELSAT 10A telecommunications satellite (formerly W2A)	10° E
23.	2009-065A	EUTELSAT 36B telecommunications satellite (formerly W7)	36° E
24.	2010-069A	EUTELSAT KA-SAT 9A telecommunications satellite (formerly KA-SAT)	9° E
25.	2011-051A	EUTELSAT 7 West A telecommunications satellite (formerly Atlantic Bird™ 7)	7° W
26.	2011-057A	EUTELSAT 16A telecommunications satellite (formerly W3C)	16° E
27.	2012-062B	EUTELSAT 21B telecommunications satellite	21.5° E
28.	2012-069A	EUTELSAT 70B telecommunications satellite	70.5° E

Table 3  
**French satellites still in orbit but no longer operational**

No.	Registration number	Satellite	Orbit
1.	1965-096A	A 1 experimental satellite (Asterix)	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 (ECS 1) telecommunications satellite (European Space Agency (ESA))	GEO
11.	1984-081A	EUTELSAT I-F2 (ECS 2) telecommunications satellite (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 (ECS 4) telecommunications satellite	GEO
16.	1988-018B	Telecom 1C telecommunications satellite	GEO
17.	1988-063B	EUTELSAT I-F5 (ECS 5) telecommunications satellite (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) experimental microsatellite	LEO
24.	1991-083A	EUTELSAT II F3 telecommunications satellite	GEO
25.	1991-084A	Telecom 2A telecommunications satellite	GEO

No.	Registration number	Satellite	Orbit
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
29.	1993-031B	ARSENE amateur radio satellite (perigee ~17,000 km)	Geostationary transfer orbit (GTO)
30.	1993-061A	SPOT 3 Earth observation satellite (orbit >800 km)	LEO
31.	1993-061B	Stella scientific satellite (orbit 800 km)	LEO
32.	1995-016B	HotBird™ 1 (EUTELSAT II F6) telecommunications satellite	GEO
33.	1995-033A	Helios 1A space observation satellite (deactivated in February 2012 following deorbiting manoeuvres)	LEO
34.	1995-033B	Cerise research satellite (orbit ~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.	1997-049A	W75 telecommunications satellite (formerly Eurobird™ 4, Hot Bird™ 3) (deactivated in July 2011 following deorbiting manoeuvres)	GEO
38.	1998-056A	EUTELSAT W2 telecommunications satellite (deactivated in March 2010 following deorbiting manoeuvres)	GEO
39.	1999-064A	Helios 1B observations satellite (withdrawn from service on 21 October 2004 with a perigee of ~630 km)	LEO
40.	1999-064B	Clémentine experimental satellite (perigee ~600 km)	LEO
41.	2000-052A	Eurobird™ 4A telecommunications satellite (formerly W1) (deactivated in February 2012 following deorbiting manoeuvres)	LEO
42.	2002-021B	Idefix amateur radio satellite (attached to third stage of Ariane 4-V151 launcher, orbit ~800 km)	LEO
43.	2004-025C	DEMETER scientific microsatellite (scientific use terminated in December 2010; deactivated in February 2011, orbit 650 km)	LEO
44.	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
45.	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
46.	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

No.	Registration number	Satellite	Orbit
47.	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
48.	2009-008C	SPIRALE A experimental satellite (deactivated at the beginning of 2011)	GTO
49.	2009-008D	SPIRALE B experimental satellite (deactivated at the beginning of 2011)	GTO
50.	2010-056A	Eutelsat W3B telecommunications satellite (failed launch into geostationary orbit; remains in geostationary transfer orbit)	GTO
51.	2012-006* (D, G, H and J)	Radiation On Bipolar for University Satellite Test Application (ROBUSTA) CubeSat (satellite lost shortly after launch)	LEO