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

Note verbale dated 28 February 2012 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) presents its compliments to the Secretary-General of the United Nations and, 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 on 19 October 2010 and during the period from 1 January to 31 December 2011 (annex I), information on space objects registered by France that re-entered the Earth's atmosphere between 1 January and 31 December 2011 (annex II) and supplementary information on space objects previously launched 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 (see annex I).

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 291 space objects as at the end of 2011. Of those objects, 109 are satellites (of which 62 are operational) and 182 are 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 on 19 October 2010 and between 1 January and 31 December 2011**

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics				Ariane launch number	Launched space objects	State/organization	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)				
2010-054A	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M079	France
2010-054B	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M074	France
2010-054C	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M076	France
2010-054D	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M077	France
2010-054E	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M075	France
2010-054F	19 October 2010	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST22	Globalstar M073	France
2011-033A	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	105	52	1 004	965	Globalstar 2 voice communication and data satellite	ST23	Globalstar M083	France
2011-033B	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 415	1 412	Globalstar 2 voice communication and data satellite	ST23	Globalstar M088	France
2011-033C	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST23	Globalstar M091	France

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

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics					Ariane launch number	Launched space objects	State/organization	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of space object				
2011-033D	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 414	1 413	Globalstar 2 voice communication and data satellite	ST23	Globalstar M085	France	
2011-033E	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	114	52	1 411	1 408	Globalstar 2 voice communication and data satellite	ST23	Globalstar M081	France	
2011-033F	13 July 2011	Baikonur, Kazakhstan	Soyuz 2-1a	108	52	1 173	1 107	Globalstar 2 voice communication and data satellite	ST23	Globalstar M089	France	
2011-051A	24 September 2011	Sea launch	Zenit-3SL	1 436	0	35 795	35 778	European Telecommunications Satellite Organization (EUTELSAT)	—	Atlantic Bird™ 7	France	
2011-057A	7 October 2011	Xichang, China	LM-3B	1 436	0	35 797	35 777	EUTELSAT	—	EUTELSAT W3C	France	
2011-076A	17 December 2011	Kourou, French Guiana	Soyuz ST-A	98	98	691	677	Listening system microsatellite (demonstrator)	S02	ELISA W11	France	
2011-076B	17 December 2011	Kourou, French Guiana	Soyuz ST-A	98	98	691	676	Listening system microsatellite (demonstrator)	S02	ELISA E24	France	
2011-076C	17 December 2011	Kourou, French Guiana	Soyuz ST-A	98	98	691	678	Listening system microsatellite (demonstrator)	S02	ELISA W23	France	
2011-076D	17 December 2011	Kourou, French Guiana	Soyuz ST-A	98	98	691	675	Listening system microsatellite (demonstrator)	S02	ELISA E12	France	
2011-076F	17 December 2011	Kourou, French Guiana	Soyuz ST-A	98	98	699	697	Earth observation satellite	S02	Pleiades-1	France	
2011-080A	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	921	Globalstar 2 voice communication and data satellite	ST24	Globalstar M084	France	
2011-080B	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	920	Globalstar 2 voice communication and data satellite	ST24	Globalstar M080	France	
2011-080C	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	918	Globalstar 2 voice communication and data satellite	ST24	Globalstar M082	France	

<i>Registration number</i>	<i>Date of launch</i>	<i>Launch site</i>	<i>Type of launcher</i>	<i>Basic orbital characteristics</i>					<i>Ariane launch number</i>	<i>Launched space objects</i>	<i>State/organization</i>	<i>Remarks</i>
				<i>Nodal period (minutes)</i>	<i>Inclination (degrees)</i>	<i>Apogee (km)</i>	<i>Perigee (km)</i>	<i>General function of space object</i>				
2011-080D	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	917	Globalstar 2 voice communication and data satellite	ST24	Globalstar M092	France	
2011-080E	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	916	Globalstar 2 voice communication and data satellite	ST24	Globalstar M090	France	
2011-080F	28 December 2011	Baikonur, Kazakhstan	Soyuz 2-1a	103	52	926	919	Globalstar 2 voice communication and data satellite	ST24	Globalstar M086	France	

B. Registration data on other space objects launched by France between 1 January and 31 December 2011

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics					Ariane launch number	Launched space objects	State/organization	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of space object				
2011-016C	22 April	Kourou, French Guiana	Ariane 5 ECA	621	5	35 276	205	ESC-A cryogenic upper stage	A201	ESC-A	France	
2011-016D	22 April	Kourou, French Guiana	Ariane 5 ECA	536	6	30 788	193	SYLDA carrier structure	A201	SYLDA	France	
2011-022C	20 May	Kourou, French Guiana	Ariane 5 ECA	610	2	34 735	180	ESC-A cryogenic upper stage	A202	ESC-A	France	
2011-022D	20 May	Kourou, French Guiana	Ariane 5 ECA	489	2	28 199	165	SYLDA carrier structure	A202	SYLDA	France	
2011-041C	6 August	Kourou, French Guiana	Ariane 5 ECA	628	2	35 531	298	ESC-A cryogenic upper stage	A203	ESC-A	France	
2011-041D	6 August	Kourou, French Guiana	Ariane 5 ECA	623	2	35 279	296	SYLDA carrier structure	A203	SYLDA	France	
2011-049C	21 September	Kourou, French Guiana	Ariane 5 ECA	629	2	35 595	276	ESC-A cryogenic upper stage	A204	ESC-A	France	
2011-049D	21 September	Kourou, French Guiana	Ariane 5 ECA	623	2	35 299	274	SYLDA carrier structure	A204	SYLDA	France	
2011-060C	21 October	Kourou, French Guiana	Soyuz ST-B	862	55	23 648	23 604	Fregat stage with Galileo adaptor	S01	Fregat	France	
2011-076G	17 December	Kourou, French Guiana	Soyuz ST-A	97	98	611	597	Pleiades satellite carrier structure	S02	ASAP-S	France	

C. Space objects operated by foreign satellite operators that were launched by France between 1 January and 31 December 2011

Note: These space objects are not registered by France.

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics				Ariane launch number	General function of space object	Launched space objects	State/organization	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)					
2011-007A	16 February	Kourou, French Guiana	Ariane 5 ES					Johannes Kepler	A200	ATV 2	European Space Agency (ESA)	
2011-016A	22 April	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 796	35 776	Automated Transfer Vehicle (ATV); re-entered 21 June	A201	Intelsat New Dawn	Luxembourg	
2011-016B	22 April	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 797	35 777	Telecommunications satellite	A201	Al Yah Satellite Communications Company (Yahsat) 1A	United Arab Emirates	
2011-022A	20 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 817	35 755	Telecommunications satellite	A202	GSAT 8	India	
2011-022B	20 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 794	35 780	Telecommunications satellite	A202	ST 2	Singapore	
2011-041A	6 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 790	35 782	Telecommunications satellite	A203	ASTRA 1N	Luxembourg	
2011-041B	6 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 791	35 782	BSAT-3c/JSAT-110R telecommunications satellite	A203	BSAT-3C	Japan	
2011-049A	21 September	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 790	35 783	SES telecommunications satellite	A204	SES 2	Luxembourg	
2011-049B	21 September	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 810	35 764	Telecommunications satellite	A204	Arab Satellite Communications Organization (Arabsat) 5C	Arabsat	
2011-060A	21 October	Kourou, French Guiana	Soyuz ST-B	845	55	23 225	23 219	European radio-positioning satellite	S01	Galileo PFM	ESA	
2011-060B	21 October	Kourou, French Guiana	Soyuz T-	845	55	23 228	23 216	European radio-positioning satellite	S01	Galileo FM2	ESA	
2011-076E	17 December	Kourou, French Guiana	Soyuz ST-A	97	98	624	623	Earth observation microsatellite	S02	Sistema Satelital para la Observación de la Tierra (SSOT)	Chile	

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 2011***

<i>Registration number</i>	<i>Date of launch</i>	<i>General function of space object</i>	<i>Atmospheric re-entry</i>
2011-007B	16 February 2011	Ariane 5 EPS stage (launch No. A200, Automated Transfer Vehicle (ATV)-2) controlled re-entry	17 February 2011
2010-065D	26 November 2010	Ariane 5 ECA SYLDA carrier structure (launch No. A198)	21 June 2011
1997-027D	3 June 1997	Ariane 4 SPELDA carrier structure (launch No. A97)	21 October 2011

* 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*

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

No.	Registration number	Satellite	Type of orbit
1.	1995-033A	Helios 1A observation satellite	Polar orbit
2.	1998-017A	SPOT 4 Earth observation satellite	820 km sun-synchronous
3.	2001-055A	French-American Jason-1 oceanography satellite	1,330 km orbit inclined at 66°
4.	2002-021A	SPOT 5 Earth observation satellite	820 km sun-synchronous
5.	2004-049A	Helios 2A observation satellite	Polar orbit
6.	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
7.	2006-016B	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite for three-dimensional characterization of clouds and aerosols	700 km polar orbit
8.	2006-063A	Convection, Rotation and Planetary Transits (COROT) satellite for the study of stars and exoplanet detection	900 km polar orbit
9.	2008-032A	French-American Jason-2 oceanography satellite	1,330 km orbit inclined at 66°
10.	2009-073A	Helios 2B observation satellite	Polar orbit
11.	2010-028A	Picard microsatellite for solar research	730 km polar orbit
12.	2010-054A	Globalstar M079 communications satellite	1,400 km orbit inclined at 52°
13.	2010-054B	Globalstar M074 communications satellite	1,400 km orbit inclined at 52°
14.	2010-054C	Globalstar M076 communications satellite	1,400 km orbit inclined at 52°
15.	2010-054D	Globalstar M077 communications satellite	1,400 km orbit inclined at 52°
16.	2010-054E	Globalstar M075 communications satellite	1,400 km orbit inclined at 52°
17.	2010-054F	Globalstar M073 communications satellite	1,400 km orbit inclined at 52°
18.	2011-033A	Globalstar M083 communications satellite	1,400 km orbit inclined at 52°
19.	2011-033B	Globalstar M088 communications satellite	1,400 km orbit inclined at 52°
20.	2011-033C	Globalstar M091 communications satellite	1,400 km orbit inclined at 52°
21.	2011-033D	Globalstar M085 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
22.	2011-033E	Globalstar M081 communications satellite	1,400 km orbit inclined at 52°
23.	2011-033F	Globalstar M089 communications satellite	1,400 km orbit inclined at 52°
24.	2011-076A	ELISA W11 microsatellite (demonstrator)	Polar orbit
25.	2011-076B	ELISA E24 microsatellite (demonstrator)	Polar orbit
26.	2011-076C	ELISA W23 microsatellite (demonstrator)	Polar orbit
27.	2011-076D	ELISA E12 microsatellite (demonstrator)	Polar orbit
28.	2011-076F	PLEIADES-1 Earth observation satellite	Polar orbit
29.	2011-080A	Globalstar M084 communications satellite	1,400 km orbit inclined at 52°
30.	2011-080B	Globalstar M080 communications satellite	1,400 km orbit inclined at 52°
31.	2011-080C	Globalstar M082 communications satellite	1,400 km orbit inclined at 52°
32.	2011-080D	Globalstar M092 communications satellite	1,400 km orbit inclined at 52°
33.	2011-080E	Globalstar M090 communications satellite	1,400 km orbit inclined at 52°
34.	2011-080F	Globalstar M086 communications satellite	1,400 km orbit inclined at 52°

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

No.	Registration number	Satellite	Orbital position
1.	1996-044B	Telecom 2D telecommunications satellite	8° W
2.	1996-067A	W48 telecommunications satellite (formerly Eurobird™ 9, Hot Bird™ 2)	48° E
3.	1998-013A	Eurobird™ 16 telecommunications satellite (formerly Hot Bird™ 4)	16° E
4.	1998-057A	Eurobird™ 2 telecommunications satellite (formerly Hot Bird™ 5)	25.5° E
5.	1999-018A	W6 telecommunications satellite (formerly W3)	21.5° E
6.	2000-019A	SESAT 1 telecommunications satellite	16° E
7.	2000-028A	W4 telecommunications satellite	36° E
8.	2000-052A	Eurobird™ 4A telecommunications satellite (formerly W1)	4° E
9.	2001-011A	Eurobird™ 1 telecommunications satellite	28.5° E
10.	2001-042A	Atlantic Bird™ 2 telecommunications satellite	8° W
11.	2002-035A	Atlantic Bird™ 3 telecommunications satellite	5° W
12.	2002-038A	Hot Bird™ 6 telecommunications satellite	13° E
13.	2002-040A	Atlantic Bird™ 1 telecommunications satellite	12.5° W
14.	2002-051A	W5 telecommunications satellite	70.5° E
15.	2003-043A	Eurobird™ 3 telecommunications satellite (formerly e-Bird™)	33° E
16.	2004-008A	W3A telecommunications satellite	7° E
17.	2005-041B	Syracuse 3A telecommunications satellite	47° E
18.	2006-007B	Eurobird™ 9A telecommunications satellite (formerly Hot Bird™ 7A)	9° E
19.	2006-032A	Hot Bird™ 8 telecommunications satellite	13° E
20.	2006-033B	Syracuse 3B telecommunications satellite	5° W
21.	2008-065A	Hot Bird™ 9 telecommunications satellite	13° E
22.	2008-065B	W2M telecommunications satellite	48° E
23.	2009-008B	Eutelsat 3C telecommunications satellite (formerly Hot Bird™ 10, Atlantic Bird™ 4A)	3° E
24.	2009-016A	EUTELSAT W2A telecommunications satellite	10° E
25.	2009-065A	EUTELSAT W7 telecommunications satellite	36° E
26.	2010-069A	Eutelsat KA-SAT telecommunications satellite	9° E
27.	2011-051A	EUTELSAT Atlantic Bird 7 telecommunications satellite	7° W
28.	2011-057A	EUTELSAT W3C telecommunications satellite	14.5° E

Table 3
French satellites still in orbit but no longer operational

No.	Registration number	Satellite	Orbit
1.	1965-096A	A1 experimental satellite (<i>Astérix</i>)	Low Earth orbit (LEO)
2.	1965-101A	FR1 technological satellite	LEO
3.	1966-013A	Diapason (D1-A) 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 (GEO)	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	SARA experimental microsatellite	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

No.	Registration number	Satellite	Orbit
29.	1993-031B	ARSENNE 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 telecommunications satellite	GEO
33.	1995-033B	Cerise research satellite (orbit ~600 km)	LEO
34.	1995-067A	Telecom 2C telecommunications satellite	GEO
35.	1997-049A	W7S telecommunications satellite (ex Eurobird 4, Hot Bird 3) (deactivated in July 2011 following deorbiting manoeuvres)	GEO
36.	1998-056A	W2 telecommunications satellite (deactivated in March 2010 following deorbiting manoeuvres)	GEO
37.	1999-064A	Helios 1B observations satellite (withdrawn from service on 21 October 2004 with a perigee of ~630 km)	LEO
38.	1999-064B	Clémentine experimental satellite (perigee ~600 km)	LEO
39.	2002-021B	Idefix amateur radio satellite (attached to third stage of Ariane 4-V151 launcher, orbit ~800km)	LEO
40.	2004-025C	DEMETER scientific microsatellite (scientific use terminated in December 2010; deactivated in February 2011)	LEO
41.	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
42.	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
43.	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
44.	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
45.	2009-008C	SPIRALE A experimental satellite (deactivated at the beginning of 2011)	LEO
46.	2009-008D	SPIRALE B experimental satellite (deactivated at the beginning of 2011)	LEO
47.	2010-056A	Eutelsat W3B telecommunications satellite (failed launch into geostationary orbit; remains in geostationary transfer orbit)	GTO