



**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 23 February 2011 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 during the period from 1 January to 31 December 2010 (annex I), information on space objects registered by France that have re-entered the Earth's atmosphere during that period (annex II) and supplementary information on France's previously launched space objects (annex III).

The Permanent Mission of France has the further honour to inform the Secretary-General that the French National Registry of Objects Launched into Outer Space currently contains entries for 262 space objects. Of those objects, 84 are satellites (of which, 41 are operational) and 178 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 between 1 January and 31 December 2010

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics					Remarks		
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	General function of space object	Ariane launch number	Launched space objects	State/organization
2010-028A	15 June	Orenburg, Russian Federation	Dnepr	99	98	729	726	Picard microsatellite for solar research	-	Picard	France
2010-056A	28 October	Kourou, French Guiana	Ariane 5 ECA	632	2	35 775	265	Eutelsat W3B telecommunications satellite ^a	V 197	W3B	France
2010-069A	26 December	Baikonur, Kazakhstan	Proton	1 436	0	35 856	35 714	Eutelsat KA-SAT telecommunications satellite	-	KA-SAT	France

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

^a Failed launch into geostationary orbit (remains in geostationary transfer orbit).

B. Registration data on other space objects launched by France between 1 January and 31 December 2010

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics				General function of space object	Ariane launch number	Launched space objects	Remarks
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)				
2010-021C	21 May	Kourou, French Guiana	Ariane 5 ECA	630	3	35 660	249	ESC-A cryogenic upper stage	V 194	ESC-A	France
2010-021D	21 May	Kourou, French Guiana	Ariane 5 ECA	617	3	35 013	234	SYLDA inter-satellite structure	V 194	SYLDA	France
2010-032C	26 June	Kourou, French Guiana	Ariane 5 ECA	628	2	35 578	269	ESC-A cryogenic upper stage	V 195	ESC-A	France
2010-032D	26 June	Kourou, French Guiana	Ariane 5 ECA	625	2	35 386	272	SYLDA inter-satellite structure	V 195	SYLDA	France
2010-037C	4 August	Kourou, French Guiana	Ariane 5 ECA	628	2	35 563	275	ESC-A cryogenic upper stage	V 196	ESC-A	France
2010-037D	4 August	Kourou, French Guiana	Ariane 5 ECA	625	2	35 427	271	SYLDA inter-satellite structure	V 196	SYLDA	France
2010-056C	28 October	Kourou, French Guiana	Ariane 5 ECA	629	2	35 648	259	ESC-A cryogenic upper stage	V 197	ESC-A	France
2010-056D	28 October	Kourou, French Guiana	Ariane 5 ECA	627	2	35 504	257	SYLDA inter-satellite structure	V 197	SYLDA	France
2010-065C	26 November	Kourou, French Guiana	Ariane 5 ECA	630	2	35 731	212	ESC-A cryogenic upper stage	V 198	ESC-A	France
2010-065D	26 November	Kourou, French Guiana	Ariane 5 ECA	628	2	35 627	216	SYLDA inter-satellite structure	V 198	SYLDA	France
2010-070C	29 December	Kourou, French Guiana	Ariane 5 ECA	629	3	35 647	252	ESC-A cryogenic upper stage	V 199	ESC-A	France
2010-070D	29 December	Kourou, French Guiana	Ariane 5 ECA	630	3	35 694	272	SYLDA inter-satellite structure	V 199	SYLDA	France

C. Space objects operated by foreign satellite operators that were launched by France between 1 January and 31 December 2010

Note: These space objects are not registered by France.

Registration number	Date of launch	Launch site	Type of launcher	Basic orbital characteristics					General function of space object	Ariane launch number	Launched space objects	State/organization
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)	Perigee (km)				
2010-021A	21 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 791	35 783	35 783	ASTRA 3B satellite	V 194	ASTRA 3B	Luxembourg
2010-021B	21 May	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 793	35 781	35 781	COMSATBw-2 satellite	V 194	COMSATBw-2	Germany
2010-032A	26 June	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 792	35 784	35 784	COMS 1 satellite	V 195	COMS 1	Republic of Korea
2010-032B	26 June	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 799	35 775	35 775	Arab Satellite Communications Organization (Arabsat)-5A satellite	V 195	Arabsat-5A	Arabsat
2010-037A	4 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 804	35 769	35 769	Nilesat 201 satellite	V 196	Nilesat 201	Egypt
2010-037B	4 August	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 801	35 772	35 772	Regional African Satellite Communication Organization (RASCOM)-QAF IR	V 196	RASCOM-QAF IR	RASCOM
2010-056B	28 October	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 802	35 771	35 771	BSAT-3B satellite	V 197	BSAT-3B	Japan
2010-065A	26 November	Kourou, French Guiana	Ariane 5 ECA	1 433	0	35 834	35 635	35 635	Hylas 1 satellite	V 198	Hylas 1	United Kingdom
2010-065B	26 November	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 805	35 768	35 768	Intelsat 17 satellite	V 198	Intelsat 17	Luxembourg
2010-070A	29 December	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 787	35 783	35 783	Hispasat 1E satellite	V 199	Hispasat 1E	Spain
2010-070B	29 December	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 793	35 781	35 781	Koreasat 6 satellite	V 199	Koreasat 6	Republic of Korea

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 2010*

<i>Registration number</i>	<i>Date of launch</i>	<i>General function of space object</i>	<i>Atmospheric re-entry</i>
2009-058D	29 October 2009	Ariane 5 SYLDA carrier structure (V 192)	9 September 2010
2001-029D	12 July 2001	Ariane 5 SYLDA carrier structure (V 142)	6 October 2010

* 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

Registration number	Satellite	Type of orbit
1995-033A	Helios 1A observation satellite	Polar orbit
1998-017A	SPOT 4 Earth observation satellite	820 km sun-synchronous
2001-055A	French-American Jason-1 oceanography satellite	1,330 km orbit inclined at 66°
2002-021A	SPOT 5 Earth observation satellite	820 km sun-synchronous
2004-025C	Detection of Electro-Magnetic Emissions Transmitted from Earthquake Regions (DEMETER) scientific microsatellite: scientific use terminated in December 2010; satellite deactivated at the beginning of 2011	660 km polar orbit
2004-049A	Helios 2A observation satellite	Polar orbit
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
2006-016B	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite for three-dimensional characterization of clouds and aerosols	700 km polar orbit
2006-063A	Convection, Rotation and Planetary Transits (COROT) satellite for the study of stars and exoplanet detection	900 km polar orbit
2008-032A	French-American Jason-2 oceanography satellite	1,330 km orbit inclined at 66°
2009-073A	Helios 2B observation satellite	Polar orbit
2010-028A	Picard microsatellite for solar research	730 km polar orbit

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

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

<i>Registration number</i>	<i>Satellite</i>	<i>Orbital position</i>
1996-044B	Telecom 2D telecommunications satellite	8° W
1996-067A	W48 telecommunications satellite (formerly Eurobird™ 9, Hot Bird™ 2)	48° E
1997-049A	W75 telecommunications satellite (formerly Eurobird™ 4, Hot Bird™ 3)	75° E
1998-013A	Eurobird™ 16 telecommunications satellite (formerly Hot Bird™ 4)	16° E
1998-057A	Eurobird™ 2 telecommunications satellite (formerly Hot Bird™ 5)	25.5° E
1999-018A	W6 telecommunications satellite (formerly W3)	21.5° E
2000-019A	SESAT 1 telecommunications satellite	16° E
2000-028A	W4 telecommunications satellite	36° E
2000-052A	Eurobird™ 4A telecommunications satellite (formerly W1)	4° E
2001-011A	Eurobird™ 1 telecommunications satellite	28.5° E
2001-042A	Atlantic Bird™ 2 telecommunications satellite	8° W
2002-035A	Atlantic Bird™ 3 telecommunications satellite	5° W
2002-038A	Hot Bird™ 6 telecommunications satellite	13° E
2002-040A	Atlantic Bird™ 1 telecommunications satellite	12.5° W
2002-051A	W5 telecommunications satellite	70.5° E
2003-043A	Eurobird™ 3 telecommunications satellite (formerly e-Bird™)	33° E
2004-008A	W3A telecommunications satellite	7° E
2005-041B	Syracuse 3A telecommunications satellite	47° E
2006-007B	Eurobird™ 9A telecommunications satellite (formerly Hot Bird™ 7A)	9° E
2006-032A	Hot Bird™ 8 telecommunications satellite	13° E
2006-033B	Syracuse 3B telecommunications satellite	5° W
2008-065A	Hot Bird™ 9 telecommunications satellite	13° E
2008-065B	W2M telecommunications satellite	16° E
2009-008B	Atlantic Bird™ 4A telecommunications satellite (formerly Hot Bird™ 10)	7° W
2009-008C	SPIRALE A experimental satellite	Geostationary transfer orbit (GTO)
2009-008D	SPIRALE B experimental satellite	GTO
2009-016A	EUTELSAT W2A telecommunications satellite	10° E
2009-065A	EUTELSAT W7 telecommunications satellite	36° E
2010-069A	Eutelsat KA-SAT telecommunications satellite	9° E

Table 3
French satellites still in orbit but no longer operational

<i>Registration number</i>	<i>Satellite</i>	<i>Orbit</i>
1965-096A	A1 experimental satellite (Astérix)	Low Earth orbit (LEO)
1965-101A	FR1 technological satellite	LEO
1966-013A	Diapason (DI-A) experimental satellite	LEO
1967-011A	Diadème 1 experimental satellite	LEO
1967-014A	Diadème 2 experimental satellite	LEO
1971-071A	Eole 1 (CAS-A) experimental data collection satellite	LEO
1974-101A	Symphonie 1 experimental telecommunications satellite	Geostationary Earth orbit (GEO)
1975-010A	Starlette scientific satellite	LEO
1975-077A	Symphonie 2 experimental telecommunications satellite	GEO
1983-058A	EUTELSAT I-F1 (ECS 1) telecommunications satellite (European Space Agency (ESA))	GEO
1984-081A	EUTELSAT I-F2 (ECS 2) telecommunications satellite (ESA)	GEO
1984-081B	Telecom 1A telecommunications satellite	GEO
1985-035B	Telecom 1B telecommunications satellite	GEO
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
1987-078B	EUTELSAT I-F4 (ECS 4) telecommunications satellite	GEO
1988-018B	Telecom 1C telecommunications satellite	GEO
1988-063B	EUTELSAT I-F5 (ECS 5) telecommunications satellite (ESA)	GEO
1988-098A	TDF1 live television satellite	GEO
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
1990-063A	TDF2 live television satellite	GEO
1990-079B	EUTELSAT II F1 telecommunications satellite	GEO
1991-003B	EUTELSAT II F2 telecommunications satellite	GEO
1991-050E	SARA experimental microsatellite	LEO
1991-083A	EUTELSAT II F3 telecommunications satellite	GEO
1991-084A	Telecom 2A telecommunications satellite	GEO
1992-021A	Telecom 2B telecommunications satellite	GEO
1992-041B	EUTELSAT II F4 telecommunications satellite	GEO
1992-052C	S80/T technological satellite	LEO
1993-031B	Ariane radio-amateur satellite pour l'enseignement de l'espace (ARSENE) (perigee ~17,000 km)	GEO

<i>Registration number</i>	<i>Satellite</i>	<i>Orbit</i>
1993-061A	SPOT 3 Earth observation satellite (orbit >800 km)	LEO
1993-061B	Stella scientific satellite (orbit 800 km)	LEO
1995-016B	HotBird™ 1 telecommunications satellite	GEO
1995-033B	Cerise research satellite (orbit ~600 km)	LEO
1995-067A	Telecom 2C telecommunications satellite	GEO
1998-056A	W2 telecommunications satellite (deactivated in March 2010 following deorbiting manoeuvres)	GEO
1999-064A	Helios 1B observations satellite (withdrawn from service on 21 October 2004 with a perigee of ~630 km)	LEO
1999-064B	Clémentine experimental satellite (perigee ~600 km)	LEO
2002-021B	Idefix amateur radio satellite (attached to third stage of Ariane 4-V151 launcher, orbit ~800km)	LEO
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
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
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
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
2010-056A	Eutelsat W3B telecommunications satellite (failed launch into geostationary orbit; remains in geostationary transfer orbit (GTO))	GTO