

FOUR ORBITAL FAA-LICENSED LAUNCHES IN FISCAL YEAR (FY) 2009

In FY 2009, the Federal Aviation Administration's (FAA) Office of Commercial Space Transportation licensed four orbital launches valued at approximately \$313 million, including:

- One Delta II vehicle from Vandenberg Air Force Base;
- One Delta IV vehicle from Cape Canaveral;
- One Falcon 1 vehicle from Kwajalein Atoll; and
- One Zenit 3SL launches conducted by the multinational service provider Sea Launch.

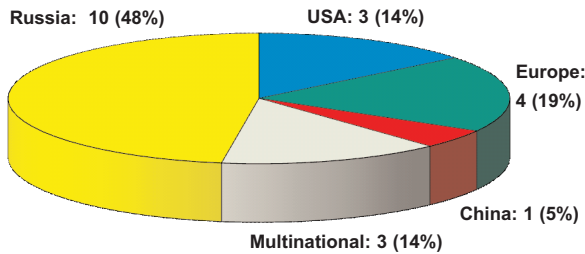
This year's total FAA-licensed launches marks a decrease over last year's count. No commercial suborbital launches occurred in FY 2009. A total of five FAA-permitted launches occurred.

FIVE-YEAR ORBITAL COMMERCIAL LAUNCH TRENDS WORLDWIDE

During the five-year period from FY 2005 to FY 2009, there were an average of 15 commercial launches to geosynchronous orbit (GSO) worldwide per fiscal year, with a low of 12 in FY 2005 and a high of 19 in FY 2009. In the same period, there were an average of seven commercial launches to non-geosynchronous orbit (NGSO) worldwide per fiscal year, with a low of one (failed) NGSO launch in FY 2005, and high of 12 commercial NGSO launches in FY 2008.

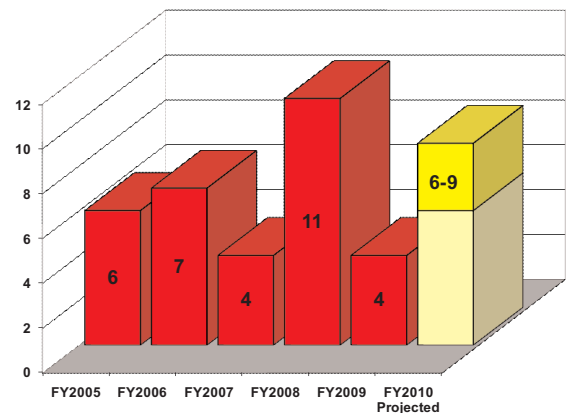
Overall, FY 2009 was an average year for worldwide commercial orbital launches—21, down from a five-year low of 31 in FY 2008. During the five-year period, there have been an average of 22 commercial orbital launches worldwide per fiscal year. The U.S. (including Sea Launch) has conducted an average of six commercial orbital launches per year from FY 2005 to FY 2009, while Europe and Russia have conducted an average of five and ten, respectively.

Worldwide Distribution of Orbital Commercial Launches in FY 2009



*This chart only includes launches with a primary payload that is commercial.

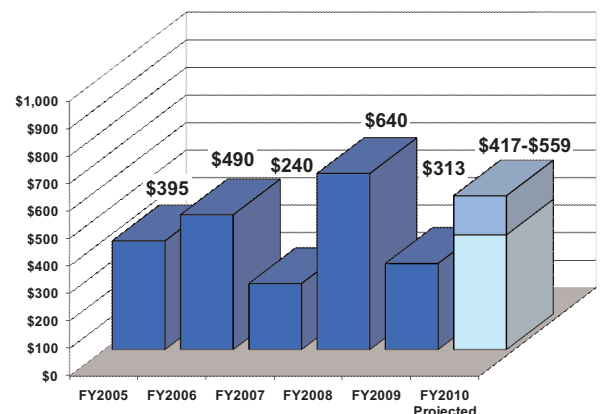
FAA-Licensed Commercial Orbital and Suborbital Launch Trend



FAA-LICENSED VEHICLES LAUNCHED IN FY 2009

	Sea Launch	United States		
	Zenit 3SL	Falcon 1	Delta II	Delta IV
Vehicle				
FY 2009 Total Launches	1	1	7	2
FY2009 Licensed Launches	1	1	1	1
FY2009 Reliability	1/1 (100%)	1/1 (100%)	7/7 (100%)	2/2 (100%)
10-Year Reliability	36/38 (95%)	2/5 (40%)	67/67 (100%)	13/13 (100%)
Maximum LEO Capacity - kg (lb)	15,246 (33,541)	420 (926)	6,100 (13,440)	25,800 (56,800)
Maximum GEO Capacity - kg (lb)	6,080 (13,376)	-	2,170 (4,790)	10,843 (23,904)

U.S. Commercial Orbital and Suborbital Launch Revenue Trend



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WORLDWIDE ORBITAL AND SUBORBITAL COMMERCIAL LAUNCH EVENTS IN FY 2009

Date	Vehicle	Site	Payload(s)	Operator	Manufacturer	Use	Commercial Price	L	M
United States									
10/24/2008	✓ Delta 2	Vandenberg	Cosmo-Skymed 3	Italian Space Agency (ASI)	Alenia Spazio	Remote Sensing	\$65M		S S
6/27/2009	✓ Delta 4 Medium	Cape Canaveral	GOES O	NOAA	The Boeing Company	Weather	\$140M		S S
7/13/2009	✓ Falcon 1	Kwajalein	RazakSAT	Malaysia National Space Agency	Astronautic Tech. (M) Sdn Bhd	Remote Sensing	\$8M		S S
China									
8/31/2009	Long March 3B	Xichang	* Palapa D	PT Indosat Tbk	Thales Alenia Space	Communications	\$70M		P S
Europe									
12/20/2008	Ariane 5 ECA	Kourou	* Hot Bird 9	Eutelsat	EADS Astrium	Communications	\$220M		S S
			* Eutelsat W2M	Eutelsat	EADS Astrium	Communications			S
2/12/2009	Ariane 5 ECA	Kourou	* Hot Bird 10	Eutelsat	EADS Astrium	Communications	\$220M		S S
			* NSS 9	SES New Skies	Orbital Sciences Corp.	Communications			S
			SPIRALES 1	DGA	Alcatel Espace	Communications			S
			SPIRALES 2	DGA	Alcatel Espace	Communications			S
7/1/2009	Ariane 5 ECA	Kourou	* TerreStar 1	TerreStar Networks Inc.	Space Systems/Loral	Communications	\$220M		S
8/21/2009	Ariane 5 ECA	Kourou	* Optus D3	Singtel/Optus	Orbital Sciences Corp.	Communications	\$220M		S S
			* JCSAT 12	Japan Satellite Systems (JSAT)	Lockheed Martin	Communications			S
Multi-National									
2/26/2009	Zenit 3SLB	Baikonur	* Telstar 11N	Loral Skynet	Space Systems/Loral	Communications	\$60M		S S
4/20/2009	✓ Zenit 3SL	Odyssey Platform	Sicral 1B	Italian Ministry of Defense	Thales Alenia Space	Communications	\$100M		S S
6/21/2009	Zenit 3SLB	Baikonur	* Measat 3A	MEASAT Satellite Systems Sdn. Bhd.	Orbital Sciences Corp.	Communications	\$60M		S S
Russia									
10/1/2008	Dnepr 1	Baikonur	THEOS	GISTDA	EADS Astrium	Remote Sensing	\$100M		S S
11/6/2008	Proton M	Baikonur	* Astra 1M	SES Astra	EADS Astrium	Communications	\$100M		S S
12/10/2008	Proton M	Baikonur	* Ciel 2	Ciel Satellite	Thales Alenia Space	Communications	\$100M		S S
3/17/2009	Rocket	Plesetsk	GOCE	European Space Agency	Thales Alenia Space	Scientific	\$13M		S S
4/3/2009	Proton M	Baikonur	* Eutelsat W2A	Eutelsat	Thales Alenia Space	Communications	\$100M		S S
5/16/2009	Proton M	Baikonur	* Protostar II	Protostar Ltd.	Boeing Satellite Systems	Communications	\$100M		S S
7/1/2009	Proton M	Baikonur	* Sirius FM-5	Sirius Satellite Radio Inc.	Space Systems/Loral	Communications	\$100M		S S
7/29/2009	Dnepr 1	Baikonur	* AprizeStar 3	Aprize Satellite	SpaceQuest, Ltd.	Communications	\$13M		S S
7/29/2009	Dnepr 1		* AprizeStar 4	Aprize Satellite	SpaceQuest, Ltd.	Communications			S
7/29/2009	Dnepr 1		* DEIMOS	Deimos Imaging SL	Surrey Satellite Technology Ltd.	Remote Sensing			S
7/29/2009	Dnepr 1		DubaiSat-1	EIAST	KARI	Remote Sensing			S
7/29/2009	Dnepr 1		Nanosat 1B	Instituto Nacional de Tecnica Aeroespacial	Inst. Nacional de Tecnica Aero.	Communications			S
7/29/2009	Dnepr 1		UK DMC 2	British National Space Centre	Surrey Satellite Technology Ltd.	Remote Sensing			S
8/11/2009	Proton M	Baikonur	* Asiasat 5	Asia Satellite Telecommunications Co.	Space Systems/Loral	Communications	\$100M		S S
9/18/2009	Proton M	Baikonur	* Nimiq 5	Telesat Canada	Space Systems/Loral	Communications	\$100M		S S

Commercial prices are estimates only.

* Denotes a commercial payload, defined as a spacecraft which serves a commercial function or is operated by a commercial entity.

✓ Denotes a commercial launch licensed by the Federal Aviation Administration's (FAA) Office of Commercial Space Transportation.

L Denotes launch outcome (S-Success, F-Failure, and P-Partial). M denotes mission outcome (S-Success, F-Failure, and P-Partial).

FAA-PERMITTED LAUNCHES IN FY 2009

Flight Date	Operator	Vehicle	Launch Site
10/24/2008	Armadillo Aerospace	MOD-1	Las Cruces International Airport, NM
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10/24/2008	TrueZero	Ignignokt	Las Cruces International Airport, NM
10/25/2008	Armadillo Aerospace	Pixel	Las Cruces International Airport, NM