

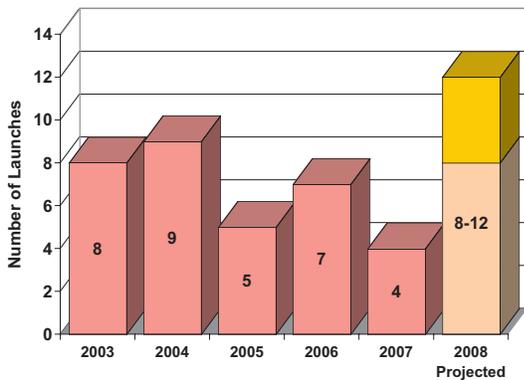
**FOUR FAA-LICENSED ORBITAL LAUNCHES AND NINE PERMITTED FLIGHTS IN 2007**

In 2007 the Federal Aviation Administration’s Office of Commercial Space Transportation (FAA/AST) licensed four orbital launches valued at approximately \$220 million. Three of the launches were successful and one launch failed. These launches include:

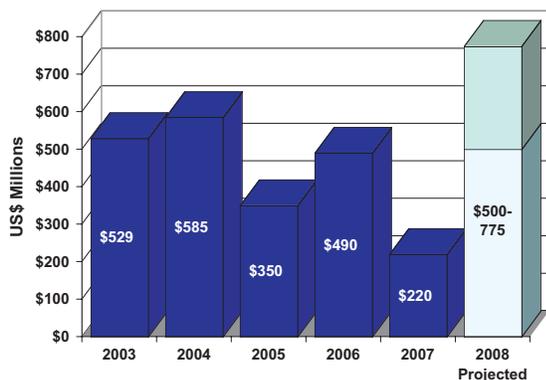
- Three Delta II vehicles carrying WorldView 1 and Cosmo-Skymed 1 and 2, all successfully launched from Vandenberg Air Force Base (VAFB) to low Earth orbit (LEO); and
- One Zenit-3SL vehicle that failed to carry NSS 8 from Sea Launch’s Odyssey Launch Platform in the Pacific Ocean to geosynchronous orbit (GSO).

The total number of FAA-licensed orbital launches in 2007 decreased from 2006, when there were seven launches, primarily because no Sea Launch flights occurred after the NSS 8 failure. The number of orbital launches is expected to bounce back in 2008, with between 8 and 12 projected to occur. Nine flights under FAA experimental permits were conducted in 2007, compared to six in 2006. Seven were made by Armadillo Aerospace and two by Blue Origin.

**FAA-Licensed Commercial Orbital Launches**

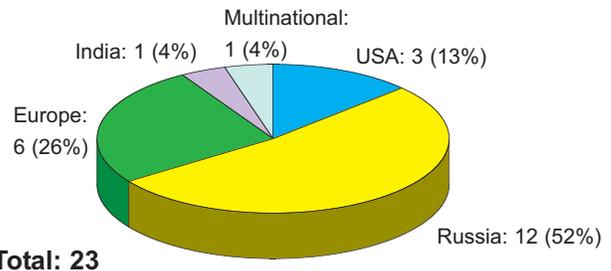


**FAA-Licensed Commercial Orbital Launch Revenues**



**WORLDWIDE ORBITAL COMMERCIAL LAUNCH MARKET SHARE FOR 2007**

Russia led the market with 12 launches in 2007, a 52 percent market share. This was the most commercial launches for Russia since 2000 and its highest commercial launch market share ever. Europe had a 26 percent share in 2007, similar to its percentage in 2005 and 2006. The United States’ share increased from 9 to 13 percent between 2006 and 2007. India conducted its first commercial launch in 2007, earning four percent market share for the year. Sea Launch also conducted one launch for four percent market share.

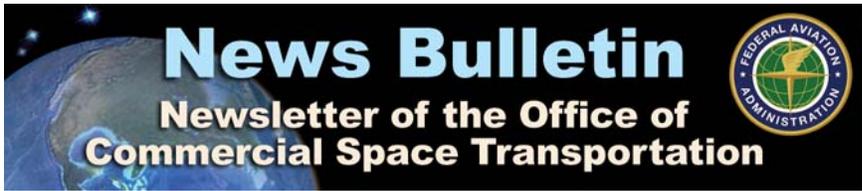


**FIVE-YEAR ORBITAL COMMERCIAL LAUNCH TRENDS WORLDWIDE**

Twenty-three commercial orbital launches occurred in 2007, which is above the average number of almost 19 launches per year for the past five years. The annual trend of more GSO than non-geosynchronous orbit (NGSO) launches worldwide was reversed in 2007. There were 12 commercial NGSO launches and 11 GSO launches. During the 2003-2007 period, there was an average of over 13 commercial launches per year to GSO and an average of 5 per year to NGSO.

**FAA-LICENSED VEHICLES LAUNCHED IN 2007**

	United States	Multinational
		
<b>Vehicle</b>	Delta II	Zenit-3SL
<b>2007 Total Launches</b>	8	1
<b>2007 Licensed Launches</b>	3	1
<b>Launch Reliability (2007)</b>	8/8 (100%)	0/1 (0%)
<b>Launch Reliability (Last 10 Years)</b>	69/69 (100%)	22/24 (92%)
<b>LEO kg (lbs)</b>	6,100 (13,440)	15,246 (33,541)
<b>GTO kg (lbs)</b>	2,170 (4,790)	6,100 (13,440)



**WORLDWIDE COMMERCIAL LAUNCH EVENTS IN 2007**

Date	Vehicle	Site	Payload(s)	Operator	Manufacturer	Use	L	M
<b>United States</b>								
6/7/2007	✓ Delta II 7420-10	VAFB	Cosmo-Skymed 1	Italian Space Agency	Alenia Spazio	Remote Sensing	S	S
9/18/2007	✓ Delta II 7925-10	VAFB	* WorldView 1	DigitalGlobe	Ball Aerospace and Technologies Corp.	Remote Sensing	S	S
12/8/2007	✓ Delta II 7420-10	VAFB	Cosmo-Skymed 2	Italian Space Agency	Alenia Spazio	Remote Sensing	S	S
<b>Europe</b>								
3/11/2007	Ariane 5 ECA	Kourou	Skynet 5A	Paradigm Secure Communications Ltd.	EADS	Communications	S	S
5/4/2007	Ariane 5 ECA	Kourou	* Insat 4B	ISRO	ISRO	Communications	S	S
			* Astra 1L	SES Astra	Lockheed Martin Corp.	Communications	S	S
			* Galaxy 17	Intelsat	Alcatel Alenia Space	Communications	S	S
8/14/2007	Ariane 5 ECA	Kourou	* Spaceway 3	Hughes Network Systems	Boeing Satellite Systems	Communications	S	S
			* BSAT 3A	Broadcasting Satellite System Corp.	Lockheed Martin Corp.	Communications	S	S
10/5/2007	Ariane 5 GS	Kourou	* Optus D2	Singtel/Optus	Orbital Sciences Corp.	Communications	S	S
			* Intelsat 11	Intelsat	Orbital Sciences Corp.	Communications	S	S
11/14/2007	Ariane 5 ECA	Kourou	Skynet 5B	Paradigm Secure Communications Ltd.	EADS	Communications	S	S
12/21/2007	Ariane 5 GS	Kourou	* Star One C1	Star One	Alcatel Espace	Communications	S	S
			* RASCOM 1	RascomStar-QAF	Alcatel Espace	Communications	S	P
			* Horizons 2	Intelsat	Orbital Sciences Corp.	Communications	S	S
<b>Russia</b>								
4/10/2007	Proton M	Baikonur	* Anik F3	Telesat Canada	EADS Astrium	Communications	S	S
4/17/2007	Dnepr 1	Baikonur	EgyptSAT	National Authority for Remote Sensing and Space Sciences	NPO Yuzhnoye	Remote Sensing	S	S
			AeroCube 2	The Aerospace Corporation	The Aerospace Corporation	Development	S	S
			CAPE-1	University of Louisiana	University of Louisiana	Development	S	S
			CTSB 1	The Boeing Company	The Boeing Company	Development	S	S
			Libertad 1	Universidad de Sergio Arboleda	Universidad de Sergio Arboleda	Development	S	S
			MAST	Stanford University	Stanford University	Development	S	S
			Polysat 3 and 4	Cal Poly Aerospace Engineering	Cal Poly Aerospace Engineering	Development	S	S
			SaudiComsat 3-7	Space Research Institute	Space Research Institute	Communications	S	S
			Saudisat 3	Space Research Institute	Space Research Institute	Scientific	S	S
5/30/2007	Soyuz	Baikonur	* Globalstar Replacement 1-4	Globalstar, Inc.	Space Systems/Loral	Communications	S	S
6/15/2007	Dnepr 1	Baikonur	* TerraSAR X	Infoterra Ltd.	EADS Astrium	Remote Sensing	S	S
6/28/2007	Dnepr 1	Dombrovskiy	* Genesis II	Bigelow Aerospace	Bigelow Aerospace	Development	S	S
7/2/2007	Kosmos 3M	Plesetsk	SAR Lupe 2	German Defense Ministry	OHB System	Intelligence	S	S
7/7/2007	Proton M	Baikonur	* DIRECTV 10	DIRECTV, Inc.	Boeing Satellite Systems	Communications	S	S
9/6/2007	Proton M	Baikonur	* JCSAT 11	Japan Satellite Systems (JSAT)	Lockheed Martin Corp.	Communications	F	F
10/21/2007	Soyuz	Baikonur	* Globalstar Replacement 5-8	Globalstar, Inc.	Space Systems/Loral	Communications	S	S
11/1/2007	Kosmos 3M	Plesetsk	SAR Lupe 3	German Defense Ministry	OHB System	Intelligence	S	S
11/18/2007	Proton M	Baikonur	* Sirius 4	SES Sirius	Lockheed Martin Corp.	Communications	S	S
12/14/2007	Soyuz	Baikonur	* RADARSAT 2	Telesat Canada	MacDonald, Dettwiler, and Associates, Ltd.	Remote Sensing	S	S
<b>Multinational</b>								
1/30/2007	✓ Zenit-3SL	Odyssey Launch Platform	* NSS 8	SES New Skies	Boeing Satellite Systems	Communications	F	F
<b>India</b>								
4/23/2007	PSLV	Satish Dhawan	AGILE AAM	Italian Space Agency ISRO	Carlo Gavazzi Space ISRO	Scientific Development	S	S

\* 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 Office of Commercial Space Transportation (FAA/AST).  
 L Denotes launch outcome (S-success, F-failure, and P-partial). M denotes mission outcome (S-success, F-failure, and P-partial).

**2007 FAA EXPERIMENTAL PERMIT FLIGHT ACTIVITY**

Date	Operator	Vehicle	Site
3/22/2007	Blue Origin	Goddard (PM 1)	West Texas Launch Site, TX
4/19/2007	Blue Origin	Goddard (PM 1)	West Texas Launch Site, TX
6/2/2007	Armadillo Aerospace	Pixel	Oklahoma Spaceport, OK
6/2/2007	Armadillo Aerospace	Pixel	Oklahoma Spaceport, OK
10/20/2007	Armadillo Aerospace	MOD 1	Oklahoma Spaceport, OK
10/27/2007	Armadillo Aerospace	MOD 1	Holloman AFB, NM
10/27/2007	Armadillo Aerospace	MOD 1	Holloman AFB, NM
10/28/2007	Armadillo Aerospace	MOD 1	Holloman AFB, NM
10/28/2007	Armadillo Aerospace	MOD 1	Holloman AFB, NM