

THIRTEEN ORBITAL AND SUBORBITAL FAA-LICENSED LAUNCHES IN FY2004

In FY2004, the Federal Aviation Administration’s (FAA) Office of the Associate Administrator for Commercial Space Transportation (AST) licensed nine orbital launches valued at approximately \$600 million, including:

- Five launches of Atlas vehicles from Cape Canaveral Air Force Station;
- Three launches conducted by the multinational Sea Launch service provider; and
- One launch of the Taurus XL.

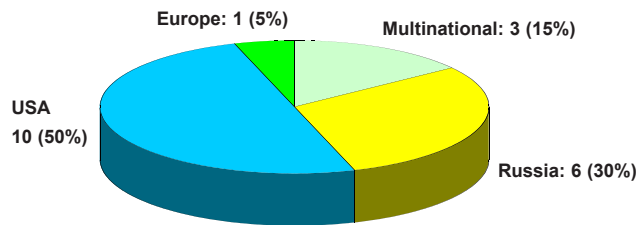
The orbital launch count is slightly higher than for the previous year (eight), but 35 percent less than the number of launches in FY2000 (12 launches). In addition to the nine orbital commercial launches, the FAA also licensed *SpaceShipOne*, clearing the way for suborbital development launches and a bid for the Ansari X Prize. Up to 10 FAA-licensed orbital and four suborbital launches are expected in FY2005.

FIVE-YEAR ORBITAL COMMERCIAL LAUNCH TRENDS WORLDWIDE

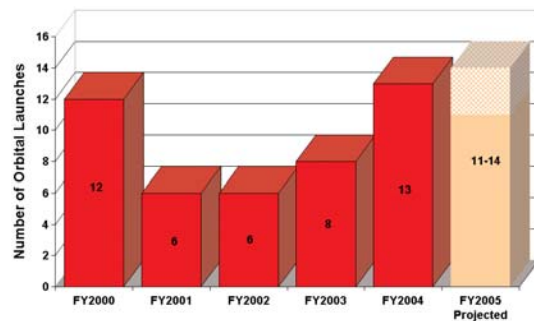
During the FY2000-FY2004 period, there was an average of 16 commercial launches worldwide to geosynchronous orbit (GSO) per fiscal year, with a low of 13 in FY2004 and a high of 18 in FY2000 and FY2001. There was a low of four commercial launches to non-geosynchronous orbits (NGSO) in both FY2002 and FY2003 and a high of 13 in FY2000. Only three orbital NGSO launches took place in FY2004.

Sixteen commercial orbital launches occurred in FY2004, lower than the average of 24 launches per fiscal year during the five-year period. The U.S. (including Sea Launch) conducted an average of eight commercial launches per year during the five-year period, with Russia having conducted about seven commercial launches. The number of commercial orbital launches from Europe has dropped from a high of 12 in FY2001 to a low of one in FY2004.

Worldwide Distribution of Orbital and Suborbital Commercial Launches in FY2004



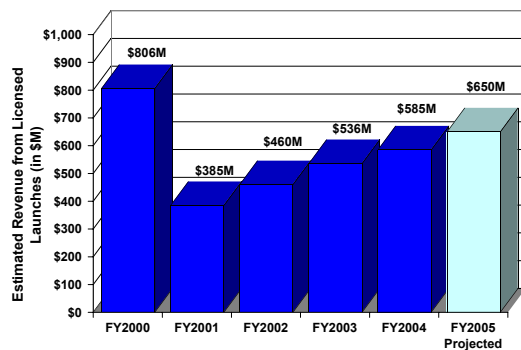
FAA-Licensed Commercial Orbital and Suborbital Launch Trend



FAA-LICENSED VEHICLES LAUNCHED IN FY2004

	United States				Sea Launch
Vehicle	Atlas 2	Atlas 3	Taurus XL	SpaceShipOne	Zenit 3SL
FY2004 Total Launches	5	2	1	4	3
FY2004 Licensed Launches	3	2	1	4	3
FY2004 Reliability	5/5 (100%)	2/2 (100%)	1/1 (100%)	4/4 (100%)	3/3 (100%)
10-Year Reliability	52/52 (100%)	5/5 (100%)	5/6 (83%)	4/4 (100%)	13/14 (93%)
Maximum LEO Capacity - kg (lb)	8,298 (18,256)	10,764 (23,709)	1,450 (3,200)	-	15,246 (33,541)
Maximum GEO Capacity - kg (lb)	3,833 (8,433)	4,500 (9,920)	557 (1,228)	-	6,000 (13,228)

U.S. Commercial Orbital and Suborbital Launch Revenue Trend





WORLDWIDE ORBITAL AND SUBORBITAL COMMERCIAL LAUNCH EVENTS IN FY2004

Date	Vehicle	Site	Payload(s)	Operator	Manufacturer	Use	Comml Price	L	M
United States									
12/17/2003	✓ Atlas 3B	CCAFS	UHF F11	U.S. Navy	Boeing	Communications	\$70M	S	S
2/5/2004	✓ Atlas 2AS	CCAFS	* AMC 10	SES Americom	Lockheed Martin	Communications	\$70M	S	S
3/13/2004	✓ Atlas 3A	CCAFS	* MBSAT 1	Mobile Broadcasting Corp.	Space Systems/Loral	Communications	\$70M	S	S
4/8/2004	✓ SpaceShipOne	Mojave	SS1 13P	Scaled Composites	Scaled Composites	Development	N/A	S	S
4/15/2004	✓ Atlas 2AS	CCAFS	* Superbird 6	Space Communications Corp.	Boeing	Communications	\$70M	S	S
5/13/2004	✓ SpaceShipOne	Mojave	SS1 14P	Scaled Composites	Scaled Composites	Development	N/A	S	S
5/19/2004	✓ Atlas 2AS	CCAFS	* AMC 11	SES Americom	Lockheed Martin	Communications	\$70M	S	S
5/20/2004	✓ Taurus XL	VAFB	Roccat 2	National Space Program Office (NSPO)	NSPO	Scientific	\$25M	S	S
6/21/2004	✓ SpaceShipOne	Mojave	SS1 15P	Scaled Composites	Scaled Composites	Development	N/A	S	S
9/29/2004	✓ SpaceShipOne	Mojave	SS1 16P	Scaled Composites	Scaled Composites	Prize	N/A	S	S
Europe									
7/17/2004	Ariane 5G	Kourou	* Anik F2	Telesat Canada	Boeing	Communications	\$140M	S	S
Russia									
10/30/2003	Rocket	Plesetsk	SERVIS 1	Japan Aerospace Exploration Agency (JAXA)	Mitsubishi	Scientific	\$13.5M	S	S
12/28/2003	Soyuz	Baikonur	* Amos 2	SpaceCom Limited	Israel Aircraft Industries (IAI)	Communications	\$35M	S	S
3/16/2004	Proton M	Baikonur	* Eutelsat W3A	Eutelsat	Astrium	Communications	\$70M	S	S
6/17/2004	Proton M	Baikonur	* Intelsat 10 02	Intelsat	Astrium	Communications	\$70M	S	S
6/29/2004	Dnepr 1	Baikonur	Demeter	Centre National d'Etudes Spatiales (CNES)	CNES	Scientific	\$9.5M	S	S
			AMSAT Echo	Amateur Radio Satellite Corp.	SpaceQuest, Ltd.	Communications			S
			* LatinSat 3	Aprize Satellite	SpaceQuest, Ltd.	Communications			S
			* LatinSat 4	Aprize Satellite	SpaceQuest, Ltd.	Communications			S
			Saudisat 3	Space Research Institute	Space Research Institute	Communications			S
			Saudisat 4	Space Research Institute	Space Research Institute	Communications			S
			Saudisat 5	Space Research Institute	Space Research Institute	Communications			S
			Unisat 3	University of Rome	University of Rome	Communications			S
8/5/2004	Proton M	Baikonur	* Amazonas 1	Hispasat	Astrium	Communications	\$70M		S
Multi-national									
1/10/2004	✓ Zenit 3SL	Odyssey Platform	* Estrela do Sul	Loral Skynet do Brasil	Space Systems/Loral	Communications	\$70M	S	S
5/4/2004	✓ Zenit 3SL	Odyssey Platform	* DirecTV 7S	DirecTV, Inc.	Space Systems/Loral	Communications	\$70M	S	S
6/28/2004	✓ Zenit 3SL	Odyssey Platform	* APStar 5/Telstar 18	APT Satellite Co., Ltd.	Space Systems/Loral	Communications	\$70M	P	S

* Denotes a commercial payload, defined as a spacecraft which serves a commercial function or is operated by a commercial entity. Commercial prices are estimates only.

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

L Denotes launch outcome (S-success, F-failure, and P-partial). M denotes mission outcome (S-success, F-failure, and P-partial).