

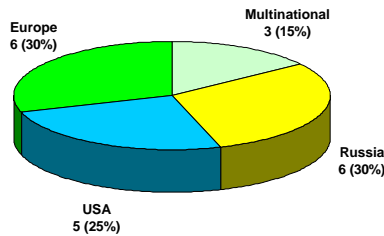
EIGHT FAA-LICENSED LAUNCHES IN FY2003

In FY2003, the Federal Aviation Administration's (FAA) Office of the Associate Administrator for Commercial Space Transportation (AST) licensed eight orbital launches valued at approximately \$536 million, including:



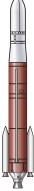


- Three launches conducted by the multinational Sea Launch service provider;
- Two flights out of Cape Canaveral Spaceport using the Atlas 5 series launch vehicles; and
- One launch each of the Atlas 3B, Delta 4 Medium Plus (4,2), and Pegasus XL.

The orbital launch count is higher than the total of six for each of the past two years, but 44 percent less than the number of launches in FY1999 (18 launches). A period of leveling off can be seen after the drying up of demand for commercial LEO launch services, with a slight increase in the number of launches in FY2003. This increase is expected to continue through FY2004 with ten projected orbital commercial launches, including five Sea Launch Zenit 3SL vehicles, two Atlas 2AS vehicles, two Atlas 3 vehicles, and a Taurus.

Worldwide Distribution of Orbital Commercial Launches in FY2003



FAA-LICENSED VEHICLES LAUNCHED IN FY2003

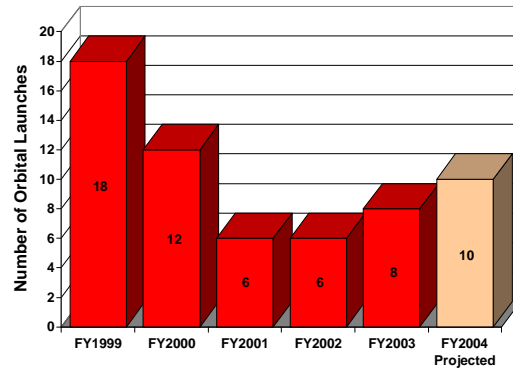
| | United States | | | | Sea Launch |
|--------------------------------|---|---|---|---|---|
| | Atlas 3 | Atlas 5 | Delta 4 | Pegasus XL | Zenit 3SL |
| Vehicle |  |  |  |  |  |
| FY2003 Total Launches | 1 | 2 | 3 | 4 | 3 |
| FY2003 Licensed Launches | 1 | 2 | 1 | 1 | 3 |
| FY2003 Reliability | 1/1 (100%) | 2/2 (100%) | 3/3 (100%) | 4/4 (100%) | 3/3 (100%) |
| 10-Year Reliability | 3/3 (100%) | 3/3 (100%) | 3/3 (100%) | 22/25 (85%) | 10/11 (91%) |
| Maximum LEO Capacity - kg (lb) | 10,764 (23,709) | 12,500 (27,558) | 11,475 (25,300) | 443 (977) | 15,246 (33,541) |
| Maximum GEO Capacity - kg (lb) | 4,500 (9,920) | 7,640 (16,843) | 6,565 (14,475) | - | 6,000 (13,228) |

FIVE-YEAR ORBITAL COMMERCIAL LAUNCH TRENDS WORLDWIDE

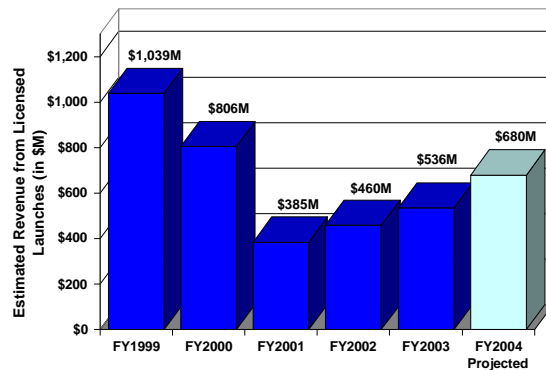
During the FY1999-FY2003 period, there was an average of 18 commercial launches worldwide to geosynchronous orbit (GSO) per fiscal year, with a low of 16 in FY2002 and FY2003 and a high of 23 in FY1999. There was a low of four commercial launches to non-geosynchronous orbits (NGSO) in both FY2002 and FY2003 and a high of 18 in FY1999.

Twenty commercial launches occurred in FY2003, lower than the average of 28 launches per fiscal year during the five-year period. The U.S. (including Sea Launch) conducted an average of ten commercial launches per year during the five-year period. Russia has averaged about eight commercial launches per fiscal year during the same period. Europe has conducted an average of nine launches per fiscal year since FY1999.

FAA-Licensed Commercial Orbital Launch Trend



U.S. Commercial Orbital Launch Revenue Trend





WORLDWIDE ORBITAL COMMERCIAL LAUNCH EVENTS IN FY2003

| Date | Vehicle | Site | Payload(s) | Operator | Manufacturer | Use | Comml Price | L | M |
|-----------------------|-----------------------------|-------------------------|------------------------------|---|---|----------------|-------------|---|---|
| United States | | | | | | | | | |
| 11/20/2002 | ✓ Delta 4 Medium-Plus (4,2) | CCAFS | * Eutelsat W5 | Eutelsat | Alcatel Espace | Communications | \$77.5M | S | S |
| 4/11/2003 | ✓ Atlas 3B | CCAFS | * AsiaSat 4 | Asia Satellite Telecommunications Co. (Asiasat) | Boeing | Communications | \$70M | S | S |
| 5/13/2003 | ✓ Atlas 5 401 | CCAFS | * Hellas-Sat 2 | Hellas Sat Consortium, Ltd. | Astrium | Communications | \$70M | S | S |
| 6/26/2003 | ✓ Pegasus XL | VAFB | * OrbView 3 | ORBIMAGE | Orbital Sciences Corp. | Remote Sensing | \$16M | S | S |
| 7/17/2003 | ✓ Atlas 5 521 | CCAFS | * Rainbow 1 | Cablevision Systems Corporation | Lockheed Martin Corp. | Communications | \$77.5M | S | S |
| Europe | | | | | | | | | |
| 12/11/2002 | Ariane 5 ECA | Kourou | * Hot Bird 7 | Eutelsat | Astrium | Communications | \$140M | | F |
| | | | Stentor | Centre National d'Etudes Spatiales (CNES) | Astrium | Communications | | | F |
| 12/17/2002 | Ariane 44L | Kourou | * NSS 6 | New Skies Satellites N.V. | Lockheed Martin Corp. | Communications | \$105M | S | S |
| 2/15/2003 | Ariane 44L | Kourou | * Intelsat 907 | Intelsat | Space Systems/Loral | Communications | \$105M | S | S |
| 4/9/2003 | Ariane 5G | Kourou | * Insat 3A | Indian Space Research Organization (ISRO) | Indian Space Research Organization (ISRO) | Communications | \$140M | S | S |
| | | | * Galaxy 12 | Pan American Satellite Corp. | Orbital Sciences Corp. | Communications | | | S |
| 6/11/2003 | Ariane 5G | Kourou | * Optus C1 | Optus Communications Pty. Ltd. | Space Systems/Loral | Communications | \$140M | S | S |
| | | | * BSat 2C | Broadcasting Satellite System Corp. (BSAT) | Orbital Sciences Corp. | Communications | | | S |
| 9/27/2003 | Ariane 5G | Kourou | * Insat 3E | Indian Space Research Organization (ISRO) | Indian Space Research Organization (ISRO) | Communications | \$140M | S | S |
| | | | * eBird | Eutelsat | Boeing | Communications | | | S |
| | | | SMART 1 | European Space Agency (ESA) | Swedish Space Corp. | Development | | | S |
| Russia | | | | | | | | | |
| 11/26/2002 | Proton K | Baikonur | * Astra 1K | SES Astra | Alcatel Espace | Communications | \$72.5M | F | F |
| 12/20/2002 | Dnepr 1 | Svobodny | * LatinSat 1 | Aprize Satellite Argentina | Aprize Satellite of Argentina | Communications | \$9.5M | S | S |
| | | | * LatinSat 2 | Aprize Satellite Argentina | Aprize Satellite of Argentina | Communications | | | S |
| | | | Rubin 2 | OHB-System | Carlo Gavazzi Space | Development | | | S |
| | | | * SaudiSat 2 | Riyadh Space Research Institute | Space Research Institute | Development | | | S |
| | | | * TrailBlazer Mass Simulator | TransOrbital, Inc. | TransOrbital, Inc. | Development | | | S |
| 12/29/2002 | Proton M | Baikonur | * Nimiq 2 | University of Rome | GAUSS | Development | | | S |
| 6/2/2003 | Soyuz | Baikonur | * Mars Express Orbiter | European Space Agency (ESA) | Lockheed Martin Corp. | Communications | \$85M | S | S |
| | | | Beagle 2 | European Space Agency (ESA) | Astrium | Scientific | \$40M | S | S |
| 6/7/2003 | Proton K | Baikonur | * AMC 9 | SES Americom | Alcatel Espace | Communications | \$72.5M | S | S |
| 9/27/2003 | Cosmos | Plesetsk | * Kaitsat 4 | Korean Advanced Institute of Science and Technology | Korean Advanced Institute of Science and Technology | Scientific | \$12M | S | S |
| | | | BilSat 1 | Turkish Military | Surrey Satellite Technology | Remote Sensing | | | S |
| | | | BNSCSat | British National Space Centre | Surrey Satellite Technology | Remote Sensing | | | S |
| | | | Larets | Russia - TBA | Russia - TBA | Scientific | | | S |
| | | | Mozhayets 4 | Mozhaiskiy Military Space Engineering Academy | Mozhaiskiy Military Space Engineering Academy | Development | | | S |
| | | | NigeriaSat 1 | Nigeria | Surrey Satellite Technology | Remote Sensing | | | S |
| | | | Rubin 4-DSI | Carlo Gavazzi Space | Carlo Gavazzi Space | Development | | | S |
| Multi-national | | | | | | | | | |
| 6/10/2003 | ✓ Zenit 3SL | Odyssey Launch Platform | * Thuraya 2 | Thuraya Satellite Communications Company | Boeing | Communications | \$75M | S | S |
| 8/7/2003 | ✓ Zenit 3SL | Odyssey Launch Platform | * EchoStar 9 | Echostar Communications Corporation | Space Systems/Loral | Communications | \$75M | S | S |
| 9/30/2003 | ✓ Zenit 3SL | Odyssey Launch Platform | * Galaxy 13 | Horizons | Boeing | Communications | \$75M | 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 (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).