

## APPENDIX A-1

## U.S. Government Spacecraft Record

(Includes spacecraft from cooperating countries launched by U.S. launch vehicles.)

Calendar Year	Earth Orbit <sup>a</sup>		Earth Escape <sup>a</sup>	
	Success	Failure	Success	Failure
1957	0	1	0	0
1958	5	8	0	4
1959	9	9	1	2
1960	16	12	1	2
1961	35	12	0	2
1962	55	12	4	1
1963	62	11	0	0
1964	69	8	4	0
1965	93	7	4	1
1966	94	12	7	1 <sup>b</sup>
1967	78	4	10	0
1968	61	15	3	0
1969	58	1	8	1
1970	36	1	3	0
1971	45	2	8	1
1972	33	2	8	0
1973	23	2	3	0
1974	27	2	1	0
1975	30	4	4	0
1976	33	0	1	0
1977	27	2	2	0
1978	34	2	7	0
1979	18	0	0	0
1980	16	4	0	0
1981	20	1	0	0
1982	21	0	0	0
1983	31	0	0	0
1984	35	3	0	0
1985	37	1	0	0
1986	11	4	0	0
1987	9	1	0	0
1988	16	1	0	0
1989	24	0	2	0
1990	40	0	1	0
1991	32 <sup>c</sup>	0	0	0
1992	26 <sup>c</sup>	0	1	0
1993	28 <sup>c</sup>	1	1	0
1994	31 <sup>c</sup>	1	1	0
1995	24 <sup>c,d</sup>	2	1	0
1996	30	1	3	0
1997	22 <sup>e</sup>	0	1	0
1998 (through September 30, 1998)	7	0	0	0
TOTAL	1,401	149	90	15

- a. The criterion of success or failure used is attainment of Earth orbit or Earth escape rather than judgment of mission success. "Escape" flights include all that were intended to go to at least an altitude equal to lunar distance from Earth.
- b. This Earth-escape failure did attain Earth orbit and, therefore, is included in the Earth-orbit success totals.
- c. This excludes commercial satellites. It counts separately spacecraft launched by the same launch vehicle.
- d. This counts the five orbital debris radar calibration spheres that were launched from STS-63 as one set of spacecraft.
- e. This includes the SSTI Lewis spacecraft that began spinning out of control shortly after it achieved Earth orbit.