

Appendix table 4-30

Federal obligations for research and development, by character of work and R&D plant: FY 1953–2009

Fiscal year	Total	Total R&D	Basic research	Applied research		Development	R&D plant
				Development	R&D plant		
Current \$thousands							
1953	2,167,456	1,919,543	115,997	NA	NA	247,913	
1954	1,918,046	1,761,840	116,033	NA	NA	156,206	
1955	2,251,894	2,044,593	130,068	NA	NA	207,301	
1956	3,266,903	2,988,203	206,441	645,506	2,136,256	278,700	
1957	4,389,237	3,932,001	262,348	662,199	3,007,454	457,236	
1958	4,906,015	4,569,722	334,543	744,264	3,490,915	336,293	
1959	7,122,610	6,693,510	465,981	874,272	5,353,257	429,100	
1960	8,080,015	7,551,746	590,374	1,282,135	5,679,237	528,269	
1961	9,607,023	9,058,623	814,513	1,663,431	6,580,679	548,400	
1962	11,069,059	10,289,947	986,314	2,018,481	7,285,152	779,112	
1963	13,662,879	12,494,611	1,151,753	2,356,150	8,986,708	1,168,268	
1964	15,323,870	14,225,354	1,303,000	2,571,452	10,350,902	1,098,516	
1965	15,745,852	14,614,249	1,435,469	2,811,761	10,367,019	1,131,603	
1966	16,178,640	15,320,334	1,579,181	3,081,066	10,660,087	858,306	
1967	17,149,186	16,529,099	1,845,847	2,785,543	11,897,709	620,087	
1968	16,525,038	15,921,208	1,840,562	2,940,500	11,140,146	603,830	
1969	16,309,900	15,640,888	1,944,773	2,700,117	10,995,998	669,012	
1970	15,863,385	15,338,937	1,925,908	2,974,890	10,438,139	524,448	
1971	16,153,756	15,542,512	1,980,141	3,143,030	10,419,341	611,244	
1972	17,097,951	16,495,895	2,186,937	3,360,759	10,948,199	602,056	
1973	17,574,486	16,800,153	2,232,006	3,349,423	11,218,724	774,333	
1974	18,176,457	17,410,128	2,387,681	3,787,559	11,234,888	766,329	
1975	19,859,548	19,038,818	2,588,427	4,141,281	12,309,110	820,730	
1976	21,616,382	20,779,658	2,767,454	4,851,878	13,160,326	836,724	
1977	24,817,577	23,450,377	3,258,640	5,255,475	14,936,262	1,367,200	
1978	27,140,849	25,845,137	3,698,604	5,908,154	16,238,379	1,295,712	
1979	29,620,597	28,145,142	4,192,665	6,342,340	17,610,137	1,475,455	
1980	31,386,095	29,830,432	4,674,156	6,923,222	18,233,054	1,555,663	
1981	34,589,634	33,103,924	5,041,295	7,171,485	20,891,144	1,485,710	
1982	37,822,363	36,432,589	5,481,605	7,540,580	23,410,404	1,389,774	
1983	40,009,032	38,711,537	6,260,131	7,993,394	24,458,012	1,297,495	
1984	44,012,149	42,224,865	7,067,359	7,911,414	27,246,092	1,787,284	
1985	50,180,369	48,359,565	7,818,682	8,314,739	32,226,144	1,820,804	
1986	52,951,181	51,412,364	8,153,076	8,349,123	34,910,165	1,538,817	
1987	57,099,656	55,253,693	8,942,425	8,998,096	37,313,172	1,845,963	
1988	58,826,512	56,769,425	9,473,618	9,176,527	38,119,280	2,057,087	
1989	63,571,605	61,406,484	10,602,011	10,163,520	40,640,953	2,165,121	
1990	65,831,189	63,559,471	11,285,593	10,336,771	41,937,107	2,271,718	
1991	64,147,951	61,295,152	12,170,794	11,797,583	37,326,775	2,852,799	
1992	68,577,184	65,592,590	12,489,864	12,000,734	41,101,992	2,984,594	
1993	70,414,697	67,314,025	13,399,121	13,491,376	40,423,528	3,100,672	
1994	69,450,776	67,235,390	13,523,476	13,887,733	39,824,181	2,215,386	
1995	70,442,935	68,186,798	13,877,031	14,557,365	39,752,402	2,256,137	
1996	69,399,164	67,653,047	14,464,035	13,795,729	39,393,283	1,746,117	
1997	71,753,430	69,826,779	14,941,892	14,423,397	40,461,490	1,926,651	
1998	73,913,988	72,100,724	15,613,012	15,309,257	41,178,455	1,813,264	
1999	77,386,368	75,340,622	17,443,653	16,083,861	41,813,108	2,045,746	
2000	80,403,169 r	75,910,322 r	19,569,849	18,900,781	37,439,692 r	4,492,847	
2001	88,562,348 r	84,492,520 r	21,958,136	22,755,600	39,778,784 r	4,069,828	
2002	98,013,347 r	93,708,604 r	23,668,345	24,338,366	45,701,893 r	4,304,743	
2003	107,793,778 r	103,527,260 r	24,751,441	26,320,402	52,455,417 r	4,266,518	
2004	116,068,604 r	112,074,452 r	26,120,663	27,237,148	58,716,641 r	3,994,152	
2005	122,618,991 r	118,847,864 r	27,140,335	26,597,910	65,109,619 r	3,771,127	
2006	123,854,731 r	121,729,949 r	26,584,592	26,951,058	68,194,299 r	2,124,782	
2007	129,431,246 r	127,262,861 r	26,865,786	27,227,779	73,169,296 r	2,168,385	
2008	129,049,527	127,105,666	27,153,966	26,739,712	73,211,988	1,943,861	

Appendix table 4-30

Federal obligations for research and development, by character of work and R&D plant: FY 1953–2009

Fiscal year	Total	Total R&D	Basic research	Applied research	Development	R&D plant
2009 ^a	136,996,492	133,348,969	32,877,860	30,830,948	69,640,161	3,647,524
Constant FY 2005 \$thousands						
1953	13,362,861	11,834,420	715,148	NA	NA	1,528,440
1954	11,688,275	10,736,380	707,087	NA	NA	951,895
1955	13,614,837	12,361,505	786,385	NA	NA	1,253,331
1956	19,251,049	17,608,739	1,216,506	3,803,807	12,588,427	1,642,310
1957	24,938,847	22,340,915	1,490,614	3,762,494	17,087,807	2,597,932
1958	27,060,204	25,205,306	1,845,245	4,105,152	19,254,909	1,854,898
1959	38,709,837	36,377,772	2,532,505	4,751,478	29,093,788	2,332,065
1960	43,370,988	40,535,405	3,168,943	6,882,099	30,484,364	2,835,582
1961	50,857,718	47,954,595	4,311,874	8,805,881	34,836,840	2,903,123
1962	57,953,188	53,874,068	5,163,948	10,567,963	38,142,157	4,079,120
1963	70,645,703	64,605,021	5,955,290	12,182,782	46,466,949	6,040,683
1964	78,302,862	72,689,596	6,658,150	13,139,765	52,891,681	5,613,265
1965	79,045,442	73,364,704	7,206,170	14,115,266	52,043,268	5,680,738
1966	79,541,003	75,321,209	7,763,918	15,147,817	52,409,474	4,219,794
1967	81,701,696	78,747,494	8,793,935	13,270,810	56,682,749	2,954,202
1968	76,047,115	73,268,329	8,470,143	13,531,983	51,266,203	2,778,785
1969	71,754,949	68,811,650	8,555,974	11,879,089	48,376,586	2,943,300
1970	66,235,428	64,045,666	8,041,370	12,421,253	43,583,044	2,189,762
1971	64,229,646	61,799,252	7,873,324	12,497,137	41,428,791	2,430,394
1972	64,912,494	62,626,784	8,302,722	12,759,146	41,564,916	2,285,710
1973	63,930,469	61,113,689	8,119,338	12,184,151	40,810,200	2,816,781
1974	61,698,768	59,097,515	8,104,823	12,856,616	38,136,076	2,601,253
1975	61,012,436	58,490,992	7,952,157	12,722,829	37,816,006	2,521,444
1976	61,955,810	59,557,633	7,931,940	13,906,214	37,719,478	2,398,177
1977	66,180,205	62,534,339	8,689,707	14,014,600	39,830,032	3,645,867
1978	67,801,272	64,564,419	9,239,580	14,759,316	40,565,523	3,236,852
1979	68,486,929	65,075,473	9,694,023	14,664,370	40,717,080	3,411,457
1980	66,679,615	63,374,617	9,930,223	14,708,354	38,736,040	3,304,999
1981	66,891,576	64,018,418	9,749,168	13,868,662	40,400,588	2,873,158
1982	68,456,766	65,941,338	9,921,457	13,648,109	42,371,772	2,515,428
1983	69,363,786	67,114,315	10,853,209	13,858,173	42,402,933	2,249,471
1984	73,586,606	70,598,336	11,816,350	13,227,577	45,554,409	2,988,270
1985	81,263,755	78,315,085	12,661,833	13,465,164	52,188,087	2,948,670
1986	83,810,036	81,374,429	12,904,520	13,214,820	55,255,089	2,435,608
1987	88,035,239	85,189,166	13,787,273	13,873,105	57,528,788	2,846,073
1988	87,879,462	84,806,431	14,152,402	13,708,585	56,945,444	3,073,031
1989	91,417,321	88,303,831	15,245,917	14,615,358	58,442,555	3,113,490
1990	91,305,394	88,154,606	15,652,695	14,336,714	58,165,197	3,150,788
1991	85,724,911	81,912,538	16,264,592	15,765,847	49,882,099	3,812,373
1992	89,316,468	85,429,265	16,267,080	15,630,026	53,532,159	3,887,202
1993	89,723,110	85,772,203	17,073,294	17,190,846	51,508,063	3,950,907
1994	86,661,812	83,897,417	16,874,814	17,329,340	49,693,263	2,764,395
1995	86,073,967	83,317,202	16,956,294	17,787,592	48,573,316	2,756,766
1996	83,192,477	81,099,313	17,338,810	16,537,676	47,222,828	2,093,164
1997	84,465,486	82,197,503	17,589,043	16,978,690	47,629,770	2,267,982
1998	85,916,527	83,808,816	18,148,334	17,795,254	47,865,227	2,107,711
1999	88,776,377	86,429,531	20,011,074	18,451,143	47,967,314	2,346,846
2000	90,452,434	85,398,045	22,015,805	21,263,113	42,119,127	5,054,390
2001	97,331,957	92,859,127	24,132,472	25,008,902	43,717,754	4,472,830
2002	105,971,832	101,317,552	25,590,167	26,314,592	49,412,794	4,654,279
2003	114,164,137	109,645,478	26,214,193	27,875,876	55,555,409	4,518,659
2004	119,856,055	115,731,570	26,973,010	28,125,927	60,632,632	4,124,486
2005	122,618,991	118,847,864	27,140,335	26,597,910	65,109,619	3,771,127
2006	119,758,974	117,704,457	25,705,465	26,059,812	65,939,179	2,054,518

Appendix table 4-30

Federal obligations for research and development, by character of work and R&D plant: FY 1953–2009

Fiscal year	Total	Total R&D	Basic research	Applied research	Development	R&D plant
2007	121,486,058	119,450,780	25,216,619	25,556,391	68,677,770	2,035,278
2008	118,415,789	116,632,103	24,916,467	24,536,348	67,179,288	1,783,686
2009 ^a	124,057,314	120,754,296	29,772,580	27,918,997	63,062,719	3,303,019

NA = not available, data collected for this table were not recorded at that level in that particular fiscal year; r = data significantly revised, replaces previously published data.

^aIncludes obligations from the additional federal R&D funding appropriated by the American Recovery and Reinvestment Act of 2009.

NOTES: Beginning in FY 2000, Department of the Air Force did not report BA 6.7 Operational Systems Development data because the agency misunderstood reporting requirements. During the Volume 57 data collection cycle, Department of the Air Force edited prior year data from FY 2000 to FY 2007 to include BA 6.7 Operational Systems Development data. These data revisions were derived from FY 2007 distribution percentages that were then applied backward to revise FY 2000–06 data.

In FY 2000, National Aeronautics and Space Administration (NASA) reclassified Space Station as a physical asset, reclassified Space Station Research as equipment, and transferred funding for the program from R&D to R&D plant. In FY 2006, NASA reclassified as operational costs funding for Space Operations, the Hubble Space Telescope, Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope previously reported as R&D plant. In FY 2000, National Institutes of Health reclassified all its development activities as research.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development: FY 2009–11.

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