



APPENDIX TABLE 4-21

Federal obligations for R&D and R&D plant, by type of work: FYs 1953–2016

(Millions of current and of constant 2009 dollars)

Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
Current \$millions						
1953	2,167	1,920	116	NA	NA	248
1954	1,918	1,762	116	NA	NA	156
1955	2,252	2,045	130	NA	NA	207
1956	3,267	2,988	206	646	2,136	279
1957	4,389	3,932	262	662	3,007	457
1958	4,906	4,570	335	744	3,491	336
1959	7,123	6,694	466	874	5,353	429
1960	8,080	7,552	590	1,282	5,679	528
1961	9,607	9,059	815	1,663	6,581	548
1962	11,069	10,290	986	2,018	7,285	779
1963	13,663	12,495	1,152	2,356	8,987	1,168
1964	15,324	14,225	1,303	2,571	10,351	1,099
1965	15,746	14,614	1,435	2,812	10,367	1,132
1966	16,179	15,320	1,579	3,081	10,660	858
1967	17,149	16,529	1,846	2,786	11,898	620
1968	16,525	15,921	1,841	2,941	11,140	604
1969	16,310	15,641	1,945	2,700	10,996	669
1970	15,863	15,339	1,926	2,975	10,438	524
1971	16,154	15,543	1,980	3,143	10,419	611
1972	17,098	16,496	2,187	3,361	10,948	602
1973	17,574	16,800	2,232	3,349	11,219	774
1974	18,176	17,410	2,388	3,788	11,235	766
1975	19,860	19,039	2,588	4,141	12,309	821



Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
1976	21,616	20,780	2,767	4,852	13,160	837
1977	24,818	23,450	3,259	5,255	14,936	1,367
1978	27,141	25,845	3,699	5,908	16,238	1,296
1979	29,621	28,145	4,193	6,342	17,610	1,475
1980	31,386	29,830	4,674	6,923	18,233	1,556
1981	34,590	33,104	5,041	7,171	20,891	1,486
1982	37,822	36,433	5,482	7,541	23,410	1,390
1983	40,009	38,712	6,260	7,993	24,458	1,297
1984	44,012	42,225	7,067	7,911	27,246	1,787
1985	50,180	48,360	7,819	8,315	32,226	1,821
1986	52,951	51,412	8,153	8,349	34,910	1,539
1987	57,100	55,254	8,942	8,998	37,313	1,846
1988	58,827	56,769	9,474	9,177	38,119	2,057
1989	63,572	61,406	10,602	10,164	40,641	2,165
1990	65,831	63,559	11,286	10,337	41,937	2,272
1991	64,148	61,295	12,171	11,798	37,327	2,853
1992	68,577	65,593	12,490	12,001	41,102	2,985
1993	70,415	67,314	13,399	13,491	40,424	3,101
1994	69,451	67,235	13,523	13,888	39,824	2,215
1995	70,443	68,187	13,877	14,557	39,752	2,256
1996	69,399	67,653	14,464	13,796	39,393	1,746
1997	71,753	69,827	14,942	14,423	40,461	1,927
1998	73,914	72,101	15,613	15,309	41,178	1,813
1999	77,386	75,341	17,444	16,084	41,813	2,046
2000	80,403	75,910	19,570	18,901	37,440	4,493
2001	88,562	84,493	21,958	22,756	39,779	4,070



Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
2002	98,013	93,709	23,668	24,338	45,702	4,305
2003	107,794	103,527	24,751	26,320	52,455	4,267
2004	116,069	112,074	26,121	27,237	58,717	3,994
2005	122,619	118,848	27,140	26,598	65,110	3,771
2006	123,855	121,730	26,585	26,951	68,194	2,125
2007	129,431	127,263	26,866	27,228	73,169	2,168
2008	129,050	127,106	27,154	26,740	73,212	1,944
2009 <sup>a</sup>	144,758	141,090	32,879	30,813	77,398	3,668
2010 <sup>a</sup>	146,968	140,355	31,795	31,933	76,627	6,613
2011	139,662	135,491	29,314	28,710	77,467	4,171
2012	140,636	138,485	30,959	30,988	76,538	2,151
2013	127,291	125,386	29,779	29,419	66,188	1,905
2014	132,496	130,279	31,588	31,321	67,370	2,218
2015	131,398	128,573	31,527	32,118	64,928	2,825
2016 preliminary	142,555	140,070	33,227	34,533	72,309	2,485
Constant 2009 \$millions						
1953	14,335	12,695	767	NA	NA	1,640
1954	12,536	11,515	758	NA	NA	1,021
1955	14,604	13,259	844	NA	NA	1,344
1956	20,650	18,889	1,305	4,080	13,504	1,762
1957	26,747	23,961	1,599	4,035	18,327	2,786
1958	29,013	27,024	1,978	4,401	20,644	1,989
1959	41,483	38,984	2,714	5,092	31,178	2,499
1960	46,410	43,376	3,391	7,364	32,621	3,034
1961	54,431	51,324	4,615	9,425	37,284	3,107
1962	62,081	57,711	5,532	11,321	40,859	4,370



Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
1963	75,695	69,222	6,381	13,053	49,788	6,472
1964	83,874	77,862	7,132	14,075	56,655	6,013
1965	84,701	78,613	7,722	15,125	55,767	6,087
1966	85,196	80,676	8,316	16,225	56,135	4,520
1967	87,630	84,461	9,432	14,234	60,796	3,169
1968	81,645	78,662	9,094	14,528	55,040	2,983
1969	77,043	73,882	9,186	12,754	51,941	3,160
1970	71,104	68,754	8,632	13,334	46,787	2,351
1971	68,915	66,308	8,448	13,409	44,451	2,608
1972	69,617	67,166	8,904	13,684	44,577	2,451
1973	68,597	65,574	8,712	13,073	43,789	3,022
1974	66,241	63,448	8,701	13,803	40,943	2,793
1975	65,608	62,897	8,551	13,681	40,664	2,711
1976	66,779	64,194	8,549	14,989	40,656	2,585
1977	71,520	67,580	9,391	15,145	43,044	3,940
1978	73,274	69,776	9,985	15,951	43,840	3,498
1979	74,033	70,345	10,479	15,852	44,014	3,688
1980	72,152	68,576	10,745	15,915	41,915	3,576
1981	72,439	69,328	10,558	15,019	43,751	3,111
1982	74,118	71,394	10,742	14,777	45,876	2,723
1983	75,092	72,657	11,749	15,003	45,905	2,435
1984	79,790	76,550	12,812	14,343	49,395	3,240
1985	88,051	84,856	13,719	14,590	56,547	3,195
1986	90,841	88,201	13,987	14,323	59,890	2,640
1987	95,821	92,723	15,007	15,100	62,616	3,098
1988	95,637	92,293	15,402	14,919	61,972	3,344



Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
1989	99,393	96,008	16,576	15,890	63,541	3,385
1990	99,323	95,895	17,027	15,596	63,273	3,427
1991	93,469	89,312	17,734	17,190	54,388	4,157
1992	97,535	93,291	17,764	17,068	58,458	4,245
1993	97,825	93,518	18,615	18,743	56,159	4,308
1994	94,427	91,415	18,387	18,882	54,146	3,012
1995	93,786	90,783	18,476	19,381	52,926	3,004
1996	90,706	88,424	18,905	18,031	51,488	2,282
1997	92,157	89,682	19,191	18,525	51,967	2,475
1998	93,776	91,475	19,808	19,423	52,244	2,301
1999	96,951	94,388	21,854	20,150	52,384	2,563
2000	98,691	93,176	24,021	23,200	45,955	5,515
2001	106,164	101,286	26,322	27,278	47,685	4,879
2002	115,623	110,545	27,921	28,711	53,913	5,078
2003	124,776	119,837	28,651	30,467	60,719	4,939
2004	131,107	126,595	29,505	30,766	66,324	4,512
2005	134,289	130,159	29,723	29,129	71,306	4,130
2006	131,369	129,115	28,197	28,586	72,332	2,254
2007	133,655	131,416	27,742	28,116	75,557	2,239
2008	130,551	128,584	27,470	27,051	74,064	1,966
2009 <sup>a</sup>	144,758	141,090	32,879	30,813	77,398	3,668
2010 <sup>a</sup>	145,686	139,130	31,518	31,654	75,958	6,556
2011	135,686	131,634	28,479	27,893	75,262	4,052
2012	134,182	132,130	29,538	29,566	73,026	2,052
2013	119,399	117,612	27,933	27,595	62,084	1,787
2014	122,195	120,150	29,132	28,886	62,132	2,045



Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
2015	119,562	116,991	28,687	29,225	59,079	2,571
2016 preliminary	127,692	125,466	29,763	30,933	64,770	2,226

NA = not available; data collected for this table were not recorded at that level in that particular fiscal year.

<sup>a</sup> Includes obligations from the additional federal R&D funding authorized by the American Recovery and Reinvestment Act of 2009.

**Note(s)**

Beginning in FY 2000, the Department of the Air Force did not report Budget Activity (BA) 6.7 Operational Systems Development data because the agency misunderstood reporting requirements. During the Volume 57 data collection cycle, the Department of the Air Force edited prior-year data from FY 2000– to 207 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 FYs 2000–06 data. In FY 2000, the National Aeronautics and Space Administration (NASA) reclassified the 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 operational costs funding for Space Operations, the Hubble Space Telescope, the Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope previously reported as R&D plant. In FY 2000, the National Institutes of Health reclassified all its development activities as research.

**Source(s)**

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

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