

**Table 1K. Federal obligations for total research, by detailed field of science  
& engineering: National Aeronautics & Space Administration,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1970	1971	1972	1973	1974	1975	1976
Total, all fields .....	1,030,217	922,688	764,592	793,920	845,667	935,139	1,222,841
Life sciences, total .....	52,480	53,396	53,004	54,581	25,537	18,000	25,227
Biol & agricultural, total .....	38,446	29,436	27,313	31,665	15,970	7,693	8,676
Biol (excl environmental) .....	NA	NA	NA	NA	NA	NA	NA
Environmental biology .....	NA	NA	NA	NA	NA	NA	NA
Agricultural .....	NA	NA	NA	NA	NA	NA	NA
Medical sciences, total .....	3,787	1,665	8,383	10,627	8,183	8,746	15,285
Clinical medical .....	3,787	0	0	1,286	959	1,150	1,147
Other medical .....	0	1,665	8,383	9,341	7,224	7,596	14,138
Life sciences, n.e.c. ....	10,247	22,295	17,308	12,289	1,384	1,561	1,266
Psychology, total .....	2,307	1,188	6,013	5,913	7,749	21,216	10,662
Biological aspects .....	2,307	1,188	3,341	2,982	1,602	2,549	0
Social aspects .....	0	0	0	328	5,670	8,979	519
Psychological sciences, n.e.c. ....	0	0	2,672	2,603	477	9,688	10,143
Physical sciences, total .....	171,386	166,001	185,763	168,837	170,711	211,751	197,054
Astronomy .....	100,875	90,688	89,859	82,020	91,564	122,002	116,575
Chemistry .....	11,618	8,274	18,436	19,322	9,890	7,951	5,252
Physics .....	58,893	67,039	77,468	64,558	66,119	71,754	66,932
Physical sciences, n.e.c. ....	0	0	0	2,937	3,138	10,044	8,295
Environmental sciences, total .....	198,720	202,913	173,443	205,828	231,559	251,311	219,039
Atmospheric sciences .....	126,163	132,715	92,943	97,360	124,724	120,715	102,725
Geological sciences .....	66,138	61,722	59,356	62,426	39,215	35,936	37,507
Oceanography .....	6,419	8,476	9,086	14,507	16,222	24,405	20,843
Environmental sciences, n.e.c. ....	0	0	12,058	31,535	51,398	70,255	57,964
Math & computer sciences, total .....	1,318	723	0	1,254	1,129	1,718	4,078
Mathematics .....	NA	NA	NA	NA	NA	NA	0
Computer sciences .....	NA	NA	NA	NA	NA	NA	0
Math & computer sciences, n.e.c. ....	NA	NA	NA	NA	NA	NA	4,078
Engineering, total .....	603,316	493,427	344,271	312,231	407,075	422,708	755,490
Aeronautical .....	243,188	198,798	119,885	135,376	226,215	225,138	411,980
Astronautical .....	154,414	134,600	47,481	29,198	80,853	83,169	163,618
Chemical .....	36,405	31,279	12,324	12,319	281	2,883	9,136
Civil .....	126	0	0	100	854	313	1,241
Electrical .....	60,097	48,118	58,103	43,104	22,928	21,811	48,815
Mechanical .....	31,756	30,106	48,157	46,234	5,454	10,256	28,971
Metallurgy & materials .....	15,345	15,150	46,446	38,509	49,614	46,154	74,293
Engineering, n.e.c. ....	61,985	35,376	11,875	7,391	20,876	32,984	17,436
Social sciences, total .....	690	0	884	1,911	540	961	1,783
Anthropology .....	0	0	0	0	0	0	0
Economics .....	34	0	0	65	504	598	1,648
Political science .....	0	0	0	50	30	235	95
Sociology .....	0	0	0	20	0	0	0
Social sciences, n.e.c. ....	656	0	884	1,776	6	128	40
History .....	0	0	0	0	6	72	NA
Linguistics .....	0	0	0	0	0	0	NA
Other social sciences .....	656	0	884	1,776	0	56	NA
Other sciences, n.e.c. ....	0	5,040	1,214	43,365	1,367	7,474	9,508

See explanatory information, if any, and SOURCE at end of table.

**Table 1K. Federal obligations for total research, by detailed field of science  
& engineering: National Aeronautics & Space Administration,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1977	1978	1979	1980	1981	1982	1983
Total, all fields .....	1,206,076	1,345,167	1,451,236	1,609,644	1,407,158	1,407,140	1,544,820
Life sciences, total .....	29,056	46,698	53,816	67,447	56,389	55,165	65,140
Biol & agricultural, total .....	15,268	22,222	19,826	29,510	29,742	29,627	33,360
Biol (excl environmental) .....	NA	22,222	17,230	16,305	12,831	17,055	19,994
Environmental biology .....	NA	0	2,592	1,760	1,697	851	1,315
Agricultural .....	NA	0	4	11,445	15,214	11,721	12,051
Medical sciences, total .....	12,218	24,476	31,209	34,865	23,943	22,433	26,205
Clinical medical .....	1,250	NA	NA	NA	NA	NA	NA
Other medical .....	10,968	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	1,570	0	2,781	3,072	2,704	3,105	5,575
Psychology, total .....	11,651	10,103	1,634	1,972	1,998	2,115	2,977
Biological aspects .....	10,443	855	86	97	128	226	250
Social aspects .....	567	441	1,082	1,270	1,044	1,122	1,394
Psychological sciences, n.e.c. ....	641	8,807	466	605	826	767	1,333
Physical sciences, total .....	264,156	264,813	304,789	321,272	280,145	289,544	369,912
Astronomy .....	140,702	148,603	213,272	229,724	198,674	184,630	265,687
Chemistry .....	11,750	9,275	6,415	6,734	7,696	6,253	9,394
Physics .....	99,046	94,324	73,285	77,211	67,078	91,273	82,922
Physical sciences, n.e.c. ....	12,658	12,611	11,817	7,603	6,697	7,388	11,909
Environmental sciences, total .....	305,592	361,571	368,137	413,444	280,624	260,616	256,714
Atmospheric sciences .....	145,989	135,895	144,010	178,102	118,435	125,128	126,409
Geological sciences .....	54,034	72,435	88,988	99,225	87,023	68,407	34,417
Oceanography .....	31,973	40,152	27,400	28,826	23,030	2,759	26,919
Environmental sciences, n.e.c. ....	73,596	113,089	107,739	107,291	52,136	64,322	68,969
Math & computer sciences, total .....	25,917	18,156	2,716	3,755	3,959	25,965	48,795
Mathematics .....	22,780	2,016	2,284	2,342	1,818	3,268	3,954
Computer sciences .....	3,137	16,140	432	1,214	1,283	21,929	42,349
Math & computer sciences, n.e.c. ....	0	0	0	199	858	768	2,492
Engineering, total .....	566,123	641,362	717,299	799,628	780,708	771,703	799,646
Aeronautical .....	272,141	336,676	433,764	491,398	475,787	486,944	503,310
Astronautical .....	130,985	134,967	212,499	233,793	233,863	207,842	228,262
Chemical .....	11,744	18,200	75	206	265	393	1,026
Civil .....	1,716	1,574	55	55	112	320	542
Electrical .....	40,486	26,370	3,100	4,103	4,256	20,100	21,773
Mechanical .....	22,873	37,002	1,875	3,062	4,034	5,183	5,200
Metallurgy & materials .....	64,458	58,916	8,300	8,856	9,734	16,240	19,092
Engineering, n.e.c. ....	21,720	27,657	57,631	58,155	52,657	34,681	20,441
Social sciences, total .....	615	54	149	217	199	63	296
Anthropology .....	0	0	0	0	0	50	0
Economics .....	539	0	0	22	0	0	0
Political science .....	30	29	15	0	0	0	0
Sociology .....	0	0	0	25	0	0	0
Social sciences, n.e.c. ....	46	25	134	170	199	13	296
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	2,966	2,410	2,696	1,909	3,136	1,969	1,340

See explanatory information, if any, and SOURCE at end of table.

**Table 1K. Federal obligations for total research, by detailed field of science  
& engineering: National Aeronautics & Space Administration,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1984	1985	1986	1987	1988	1989	1990
Total, all fields .....	1,709,200	1,783,600	2,069,000	2,269,247	2,331,575	2,878,810	3,060,691
Life sciences, total .....	57,492	68,633	84,960	96,428	100,324	123,077	140,333
Biol & agricultural, total .....	23,178	21,758	27,951	29,348	37,191	49,648	56,664
Biol (excl environmental) .....	20,598	18,878	24,697	26,104	35,297	46,939	48,127
Environmental biology .....	1,629	1,948	2,617	2,450	1,137	2,318	7,953
Agricultural .....	951	932	637	794	757	391	584
Medical sciences, total .....	28,955	31,921	33,937	33,862	36,512	45,338	52,075
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	5,359	14,954	23,072	33,218	26,621	28,091	31,594
Psychology, total .....	1,589	3,351	3,477	3,328	3,450	8,210	10,808
Biological aspects .....	262	227	243	289	300	84	85
Social aspects .....	297	1,553	1,773	1,257	1,327	5,879	7,915
Psychological sciences, n.e.c. ....	1,030	1,571	1,461	1,782	1,823	2,247	2,808
Physical sciences, total .....	364,316	454,229	554,587	623,462	643,855	807,748	890,205
Astronomy .....	277,013	310,668	362,547	410,651	364,730	428,963	462,320
Chemistry .....	7,337	16,314	11,789	13,363	27,490	47,363	35,908
Physics .....	64,907	102,981	154,427	169,412	224,801	289,825	308,311
Physical sciences, n.e.c. ....	15,059	24,266	25,824	30,036	26,834	41,597	83,666
Environmental sciences, total .....	253,891	256,977	297,197	290,524	370,729	398,620	607,642
Atmospheric sciences .....	110,301	121,217	146,048	150,218	192,490	205,635	359,563
Geological sciences .....	36,985	55,079	65,848	57,620	52,054	47,047	102,906
Oceanography .....	31,346	25,022	26,347	25,737	42,535	47,834	66,116
Environmental sciences, n.e.c. ....	75,259	55,659	58,954	56,949	83,650	98,104	79,057
Math & computer sciences, total .....	62,003	63,830	55,610	68,370	65,017	77,669	70,845
Mathematics .....	4,728	7,114	11,457	17,133	19,990	27,548	23,573
Computer sciences .....	52,994	51,692	39,745	45,867	40,488	48,148	45,216
Math & computer sciences, n.e.c. ....	4,281	5,024	4,408	5,370	4,539	1,973	2,056
Engineering, total .....	967,801	931,641	1,066,905	1,170,496	1,138,163	1,446,415	1,324,603
Aeronautical .....	596,679	528,135	560,150	548,603	565,483	737,390	684,654
Astronautical .....	316,402	355,840	459,643	556,201	489,536	594,342	499,156
Chemical .....	254	674	995	1,487	1,984	6,015	14,259
Civil .....	0	374	309	113	239	91	151
Electrical .....	18,416	7,980	6,239	6,617	6,490	8,989	11,544
Mechanical .....	6,006	6,473	5,282	9,711	12,810	14,877	15,775
Metallurgy & materials .....	14,204	15,772	16,193	19,868	18,823	35,544	59,848
Engineering, n.e.c. ....	15,840	16,393	18,094	27,896	42,798	49,167	39,216
Social sciences, total .....	286	2,718	3,419	12,532	3,212	2,665	84
Anthropology .....	6	0	0	0	0	0	0
Economics .....	0	3	3	0	0	27	0
Political science .....	0	0	0	0	25	25	0
Sociology .....	0	0	0	0	0	0	74
Social sciences, n.e.c. ....	280	2,715	3,416	12,532	3,187	2,613	10
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	1,822	2,221	2,845	4,107	6,825	14,406	16,171

See explanatory information, if any, and SOURCE at end of table.

**Table 1K. Federal obligations for total research, by detailed field of science  
& engineering: National Aeronautics & Space Administration,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1991	1992	1993	1994	1995	1996	1997
Total, all fields .....	3,371,162	3,229,305	3,548,728	3,840,559	4,046,089	3,878,032	4,184,887
Life sciences, total .....	174,544	145,692	229,962	248,867	262,196	250,060	268,165
Biol & agricultural, total .....	76,377	66,665	111,293	120,439	126,894	119,802	123,939
Biol (excl environmental) .....	61,891	55,520	102,055	110,436	116,383	108,410	113,140
Environmental biology .....	13,994	10,379	8,718	9,435	9,940	9,964	10,164
Agricultural .....	492	766	520	568	571	1,428	635
Medical sciences, total .....	71,079	63,218	104,010	112,563	118,588	107,777	121,297
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	27,088	15,809	14,659	15,865	16,714	22,481	22,929
Psychology, total .....	11,366	12,334	16,699	18,073	19,041	18,137	19,451
Biological aspects .....	71	40	62	68	68	71	72
Social aspects .....	9,426	8,751	12,862	13,920	14,668	13,473	14,563
Psychological sciences, n.e.c. ....	1,869	3,543	3,775	4,085	4,305	4,593	4,816
Physical sciences, total .....	939,726	978,154	878,121	950,335	1,001,190	970,054	1,034,197
Astronomy .....	501,766	584,504	520,184	562,962	593,089	570,450	621,324
Chemistry .....	39,161	47,457	43,390	46,958	49,471	49,588	50,579
Physics .....	316,183	287,984	280,966	304,072	320,343	311,640	323,151
Physical sciences, n.e.c. ....	82,616	58,209	33,581	36,343	38,287	38,376	39,143
Environmental sciences, total .....	667,739	631,709	852,885	923,022	972,418	936,223	1,061,120
Atmospheric sciences .....	374,372	313,763	514,374	556,674	586,464	546,390	663,492
Geological sciences .....	132,706	164,959	172,459	186,641	196,629	197,145	201,087
Oceanography .....	102,646	108,157	107,471	116,309	122,533	122,850	125,307
Environmental sciences, n.e.c. ....	58,015	44,830	58,581	63,398	66,792	69,838	71,234
Math & computer sciences, total .....	79,932	71,686	69,215	74,908	78,916	75,242	80,702
Mathematics .....	23,908	20,677	3,978	4,305	4,536	4,550	4,641
Computer sciences .....	51,080	43,799	23,874	25,838	27,220	26,318	27,633
Math & computer sciences, n.e.c. ....	4,944	7,210	41,363	44,765	47,160	44,374	48,428
Engineering, total .....	1,477,950	1,367,787	1,476,795	1,598,241	1,683,770	1,600,299	1,692,628
Aeronautical .....	788,208	708,858	971,502	1,051,393	1,107,667	1,022,148	1,132,349
Astronautical .....	534,710	522,057	388,949	420,935	443,461	444,866	453,763
Chemical .....	12,893	13,312	2,646	2,863	3,017	3,039	3,100
Civil .....	340	162	180	196	198	209	209
Electrical .....	16,634	14,807	20,951	22,674	23,887	24,350	25,013
Mechanical .....	19,055	13,680	15,649	16,936	17,842	17,896	18,254
Metallurgy & materials .....	74,253	67,409	41,705	45,135	47,550	47,610	18,956
Engineering, n.e.c. ....	31,857	27,502	35,213	38,109	40,148	40,181	40,984
Social sciences, total .....	126	39	331	361	364	406	386
Anthropology .....	0	0	0	0	0	0	0
Economics .....	36	0	0	0	0	0	0
Political science .....	0	0	0	0	0	0	0
Sociology .....	90	0	212	231	233	260	247
Social sciences, n.e.c. ....	0	39	119	130	131	146	139
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	19,779	21,904	24,720	26,752	28,194	27,611	28,238

See explanatory information, if any, and SOURCE at end of table.

**Table 1K. Federal obligations for total research, by detailed field of science & engineering: National Aeronautics & Space Administration, fiscal years 1970-2003**

[Dollars in thousands]

Field of science & engineering	1998	1999	2000	2001	Preliminary	
					2002	2003
Total, all fields .....	4,413,651	4,357,929	3,963,975	4,471,840	5,213,270	5,769,460
Life sciences, total .....	285,857	280,807	240,261	299,157	346,472	379,960
Biol & agricultural, total .....	138,286	136,787	127,636	138,324	NA	NA
Biol (excl environmental) .....	126,817	125,451	116,586	126,267	NA	NA
Environmental biology .....	10,854	10,716	9,742	11,001	NA	NA
Agricultural .....	615	620	1,308	1,056	NA	NA
Medical sciences, total .....	121,624	118,222	87,889	135,737	NA	NA
Clinical medical .....	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	25,947	25,798	24,736	25,096	NA	NA
Psychology, total .....	20,720	20,236	4,370	22,477	25,834	28,055
Biological aspects .....	65	66	955	690	NA	NA
Social aspects .....	15,763	15,299	1,292	18,770	NA	NA
Psychological sciences, n.e.c. ....	4,892	4,871	2,123	3,017	NA	NA
Physical sciences, total .....	979,466	983,616	1,134,654	834,877	1,025,755	1,179,469
Astronomy .....	575,093	578,973	710,006	559,539	NA	NA
Chemistry .....	48,325	48,403	51,279	43,369	NA	NA
Physics .....	317,333	317,643	334,368	202,540	NA	NA
Physical sciences, n.e.c. ....	38,715	38,597	39,001	29,429	NA	NA
Environmental sciences, total .....	1,032,414	1,025,831	1,001,416	979,356	1,149,975	1,292,650
Atmospheric sciences .....	662,846	657,889	620,176	608,076	NA	NA
Geological sciences .....	185,533	186,064	199,484	168,767	NA	NA
Oceanography .....	110,437	108,544	93,474	115,233	NA	NA
Environmental sciences, n.e.c. ....	73,598	73,334	88,282	87,280	NA	NA
Math & computer sciences, total .....	80,142	78,569	65,557	84,953	98,102	107,213
Mathematics .....	3,823	3,751	3,158	4,034	NA	NA
Computer sciences .....	25,287	25,164	24,948	29,497	NA	NA
Math & computer sciences, n.e.c. ....	51,032	49,654	37,451	51,422	NA	NA
Engineering, total .....	1,984,062	1,937,932	1,443,851	2,127,679	2,442,662	2,656,812
Aeronautical .....	1,287,804	1,258,826	900,791	1,371,044	NA	NA
Aeronautical .....	594,468	578,808	440,650	633,311	NA	NA
Chemical .....	2,783	2,790	3,210	2,680	NA	NA
Civil .....	118	118	0	192	NA	NA
Electrical .....	20,076	19,695	16,568	22,623	NA	NA
Mechanical .....	18,372	18,159	16,716	18,489	NA	NA
Metallurgy & materials .....	18,038	18,062	24,811	16,593	NA	NA
Engineering, n.e.c. ....	42,403	41,474	41,105	62,747	NA	NA
Social sciences, total .....	387	390	977	657	507	571
Anthropology .....	0	0	0	0	NA	NA
Economics .....	0	0	0	0	NA	NA
Political science .....	0	0	0	220	NA	NA
Sociology .....	250	252	0	218	NA	NA
Social sciences, n.e.c. ....	137	138	977	219	NA	NA
History .....	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	30,603	30,548	72,889	122,684	123,963	124,730

**KEY:** NA = Not applicable (indicates that the data collected for this table were not recorded at that level in that particular fiscal year, or that the agency or subagency did not exist as such or in that organization in that year)  
n.e.c. = Not elsewhere classified

**NOTES:** During the Vol. 45 (fiscal years 1995-97) survey cycle, the National Aeronautics & Space Administration made a statistical adjustment to the 1994 and 1995 field of science and engineering values to diminish a computational error introduced by its software.

Beginning in fiscal year 2000, the National Aeronautics & Space Administration reclassified Space Station as a physical asset and Space Station Research as equipment, and transferred funding for the program from R&D to R&D plant.

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Federal Funds for Research and Development: Fiscal Years 2001, 2002, and 2003