



CHAPTER EIGHT

FINANCES AND PROCUREMENT

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Introduction

This chapter provides an overview of NASA's budgetary and procurement activities, primarily in tabular form. The first part of the chapter covers NASA's budget; the second part addresses its procurement activities.

Finances

The tables covering NASA's budget at the end of this chapter provide top-level budget data for the years 1979–1988. More detailed budget data on each of NASA's programs are provided in Chapters 2 through 4 of Volume V of the *NASA Historical Data Book* and Chapters 2 through 5 of this volume. As shown in Table 8–1, NASA's outlays comprised only a small percentage of the total federal budget during this decade—remaining less than 1 percent for the entire period. The amount appropriated by Congress grew annually at a rate close to the rate of inflation in six of the years (FY 1981, FY 1982, FY 1983, FY 1984, FY 1985, and FY 1986) and at a greater rate in three of the years (FY 1979, FY 1980, and FY 1987). The one decrease occurred in FY 1988 but could really be considered an adjustment to the vast increase that took place in FY 1987, when NASA awarded the contract and provided funding for a replacement orbiter after the *Challenger* accident.

When looked at by individual appropriation, Congress authorized and appropriated amounts higher than NASA's budget request about half the time. However, NASA may have revised its budget request downward before submitting the budget to Congress to receive Office of Management and Budget approval.

NASA had four appropriation categories (see Figure 8–1). Research and Development (R&D) funded most of NASA's flight projects and basic research activities. The Space Flight, Control, and Data Communications (SFC&DC) appropriation funded Shuttle-related and most tracking and data acquisition activities. Research and Program Management (R&PM) financed civil service salaries regardless of the project or the office in

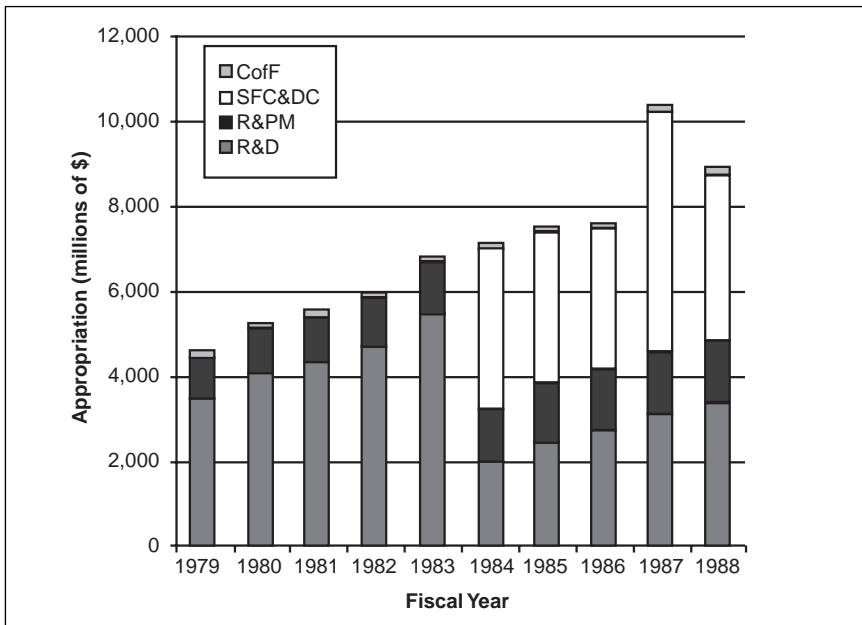


Figure 8-1. NASA Appropriations

which an individual worked, related expenses such as benefits and training, and employee travel. The Construction of Facilities (CofF) appropriation funded design, construction, purchase of land, modernization of facilities, and design of facilities planned for future authorization. By 1979, most of NASA's facilities had been acquired or built, and the amount allocated for this appropriation remained relatively low. Congress allocated funds for each specific appropriation category. By law, NASA may not reallocate funds among the appropriation categories without congressional approval.

Congress appropriated new funds for NASA each year. However, the funds in each appropriations category were available for use for a varying number of years. In addition, occasionally Congress specified in its appropriations legislation the length of time that money could be used for a particular project or the start date (other than the beginning of the fiscal year) for the availability of funds.

The tables that follow (Tables 8-2 through 8-14) use some budget-related terms unfamiliar to the reader. These are:

- **Budget authority** gives NASA permission (or authorization) to make an outlay or spend up to a specific amount. This authorization may be limited to a particular number of fiscal years and is usually for a particular purpose.
- An **appropriation** is the amount that Congress has made available for an agency's use.
- **Funding** is the amount that an entity has actually spent. It is computed at the end of the fiscal year.

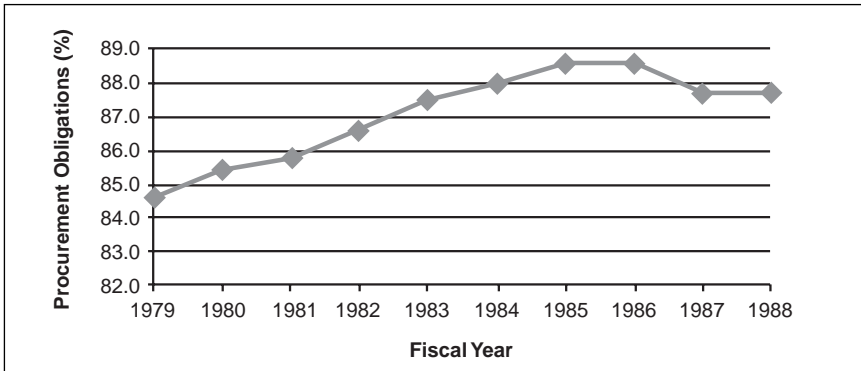


Figure 8–2. Percentage of NASA Obligations Devoted to Procurement Actions

- An **obligation** is a legal promise to pay for a specified item or service.
- The government **fiscal year** runs from October 1 through September 30. The fiscal year is designated by the year in which it ends—that is, FY 1988 begins October 1, 1987, and ends September 30, 1988.
- A **supplemental appropriation** is enacted after the regular annual appropriation act. Supplemental appropriations provide additional budget authority for programs or activities (including new programs authorized after the date of the original appropriations act) when the need for funds is too urgent to be postponed.

NASA's budget process is complex. An overview of this process is located in Chapter 1 in Volume V of the *NASA Historical Data Book*.

Procurement

The Space Act of 1958 established NASA's policy of using procurements for a large proportion of its activities. From 1979 to 1988, NASA used procurements to acquire more than 80 percent of its items, services, and systems. The proportion of obligations the agency devoted to procurement actions ranged from a low of 84.6 percent in 1979 to a high of 88.6 percent in FY 1985 and FY 1986 (Figure 8–2). During these years, NASA awarded procurements to large and small businesses, nonprofit and educational institutions, the Jet Propulsion Laboratory (JPL), other government agencies, and contractors outside the United States. The great majority (87 percent) was awarded to business firms, with the larger number awarded to small firms, but procurements with greater monetary value were awarded to large firms (Figure 8–3). During the decade, the total number of procurements reached a peak of 175,900 in 1981 and then began its decrease to a low of 108,800 in 1988 (Figure 8–4). Figure 8–5 shows the percentage of award value by type of contractor. The total value of the awards grew through the decade, with a small dip occurring only in 1986 (Figure 8–6). The combination of greater total award value and fewer awards meant that the average value of awards increased.

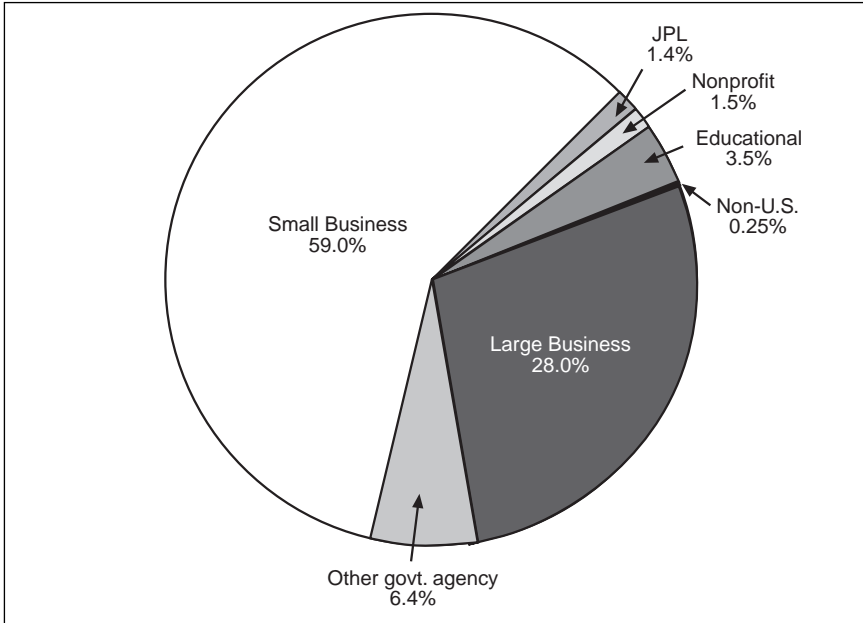


Figure 8-3. Total Percentage of Procurement Actions by Kind of Contractor (1979-1988)

NASA used a variety of contract pricing provisions in its awards. These included fixed-price, incentive, cost-plus-award-fee, cost-plus-fixed-fee, and a small number of other types of pricing provisions. Awards with the greatest monetary value used incentive or cost-plus-award-fee pricing provisions. Most awards used fixed-price provisions (FY 1979, 1983, 1984, 1985, 1986, 1987, and 1988) or incentive pricing provisions (FY 1980, 1981, and 1982).

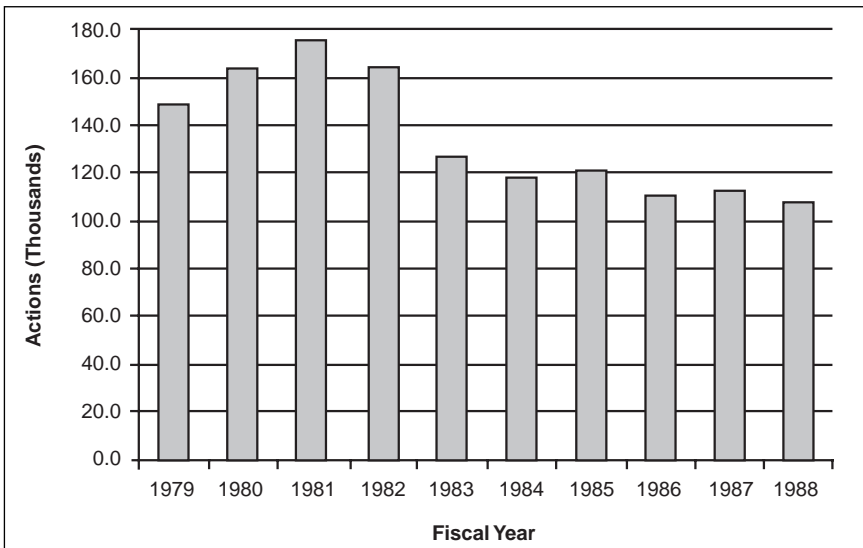


Figure 8-4. Total Number of Procurement Actions by Fiscal Year

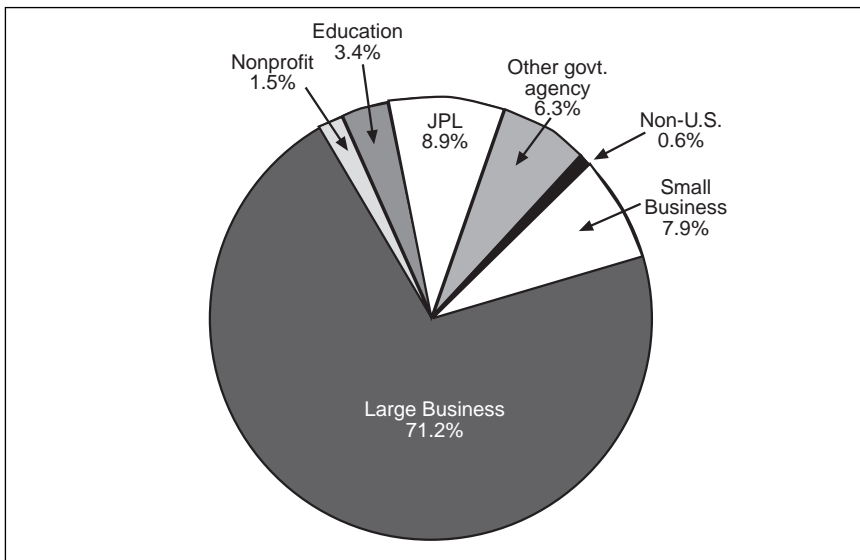


Figure 8-5. Percentage of Procurement Award Value by Kind of Contractor

Every state in the United States and the District of Columbia received NASA contracts during the decade. The greatest number of awards, with the greatest value, consistently went to California. Every geographic region increased the value of contracts it received except for New England, which ended the decade with awards of less value than it began (Figure 8-7).

Johnson Space Center and Marshall Space Flight Center awarded contracts with the greatest value throughout the decade. Rockwell International continued throughout the decade as NASA's top contractor, a position it had held since FY 1973. In all, NASA's top fifty contractors received contracts valued between 82 percent and 86 percent of the total value of NASA contracts. Of the nonprofit and educational institutions receiving NASA awards, the European Space Agency and

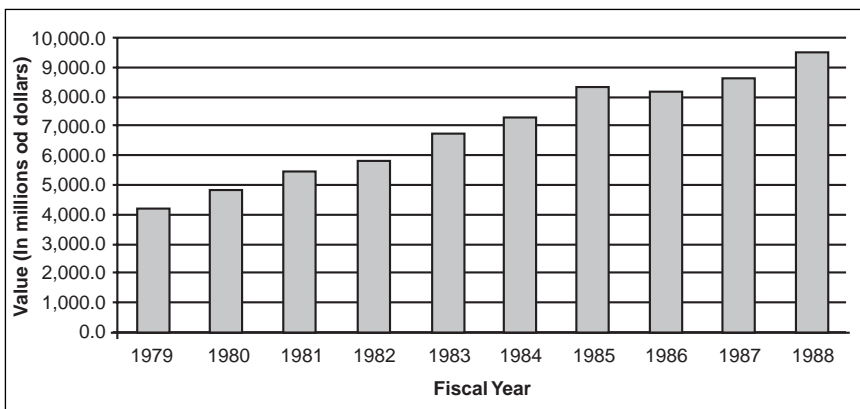


Figure 8-6. Total Value of Awards by Fiscal Year

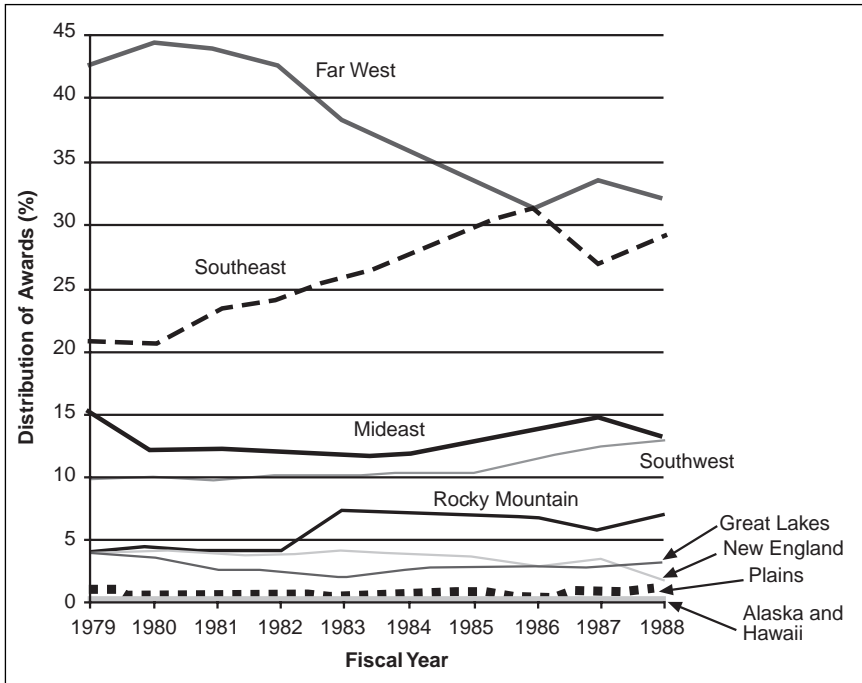


Figure 8-7. Distribution of Prime Contract Awards by Region

Stanford University led the category with each receiving awards with the greatest value for four years. Figure 8-8 shows a breakdown, by fiscal year, of NASA's total value of business and educational/non-profit awards.

NASA's Procurement Process

The Federal Acquisition Regulation (FAR), supplemented by the NASA FAR Supplement, governs all stages of the procurement process. For a competitive procurement (from 1979 to 1988, approximately 80 percent of all NASA procurements were competitive), NASA's procurement process consisted of six steps:

1. Preparation of a Procurement Request (PR)
2. Preparation of a procurement plan
3. Solicitation
4. Bid or proposal evaluation
5. Selection, negotiation, and contract award
6. Contract management or administration

Prior to the preparation of a PR, a Mission Need Statement is prepared and approved. In addition, a Work Breakdown Structure (WBS) is prepared for most projects; it provides the basic framework for the pro-

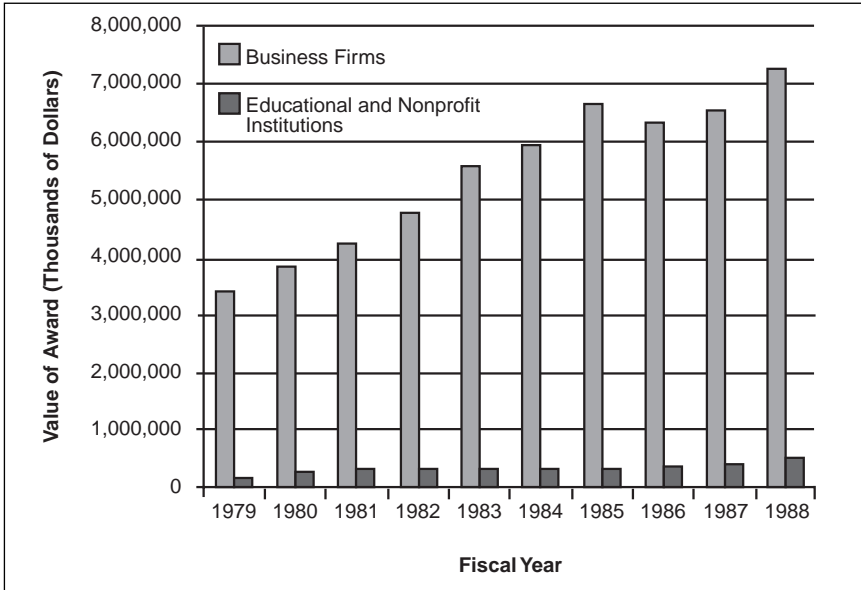


Figure 8-8. Total Value of Business and Educational and Nonprofit Awards by Fiscal Year

ject and presents the specific elements of a project to as great a level of detail as possible. It also often forms the structure of the Request for Proposal (RFP).

Procurement Request

The PR document describes NASA's requirements to procure goods or services over a particular dollar level in response to mission needs. It can include technical specifications for a material, product, or service (used primarily for procuring hardware); a statement of the work to be performed (used primarily for research and development, study, and service-oriented requirements); or a purchase description that includes the essential characteristics and functions of an item to be procured (used for off-the-shelf items). For procurements over a certain dollar amount, the PR also includes an in-house cost estimate that provides the government's best estimate of the actual price of the procurement.

Procurement Plan

A procurement plan describes each step to be taken to fulfill the procurement action. The contract negotiator, with the assistance of the PR initiator, develops the plan. Such a plan describes the items or systems to be procured in as much detail as possible, the schedule for completing the acquisition of the items or systems, possible sources for materials or services, and the recommended type of contract that will be used. It specifies whether the items will be procured through formal advertising for

competitive bids or through a negotiation process, as well as the recommended type of contract that will be awarded.

Solicitation of Proposals

If the items to be procured can be accurately defined, then formal advertising for competitive bids takes place, and the government will release an Invitation for Bid (IFB) to interested suppliers. These are usually fixed-price contracts, in which the contractor is paid a fixed price for completing the required work within the allotted time.

More often, the items, systems, or services cannot be completely defined, and a cost reimbursement contract is awarded. This type of contract allows for government payment of reasonable allowable and otherwise allowable costs as defined in the FAR or in the contract provisions. Cost-plus-award-fee and cost-plus-fixed-fee contracts are two commonly used types of cost reimbursement contracts.

For a cost reimbursement contract, the government uses an RFP. The RFP contains a complete and specific description of the items or services to be procured, all applicable specifications, quantities, time and place of delivery, method of shipment, and other requirements. To reduce the government's time and expense needed to prepare major RFPs and evaluate proposals, the solicitation is normally restricted to those contractors that NASA has determined can adequately fulfill the mission needs objectives and that have an interest in the procurement. However, the release of RFPs is also announced in the *Commerce Business Daily* publication, and others may choose to submit a proposal.

The contracting officer is responsible for selecting the contract type. This person must be satisfied that the type selected is appropriate for the PR. The key element is the degree of uncertainty in the technical performance. The less uncertainty there is, the greater the likelihood that the government will choose a fixed-price contract.

Bid or Proposal Evaluation

The evaluation of bids is a straightforward process. As long as NASA is assured that the bidder can provide the items or services specified in the IFB, the lowest price receives the award.

The evaluation of proposals submitted in response to RFPs is more complex. The government evaluates proposals in accordance with the procedures set forth in the FAR. Bidders are usually evaluated in three areas: technical competence, managerial competence, and the quality of the proposal. The relative weight given to each of these categories and to the subareas within these categories is spelled out completely in the RFP. A Source Evaluation Board, through a formal process, evaluates contracts over a certain dollar level. Members of the organization that will administer the contract and contract specialists within the Procurement Office evaluate smaller procurements.

Selection, Negotiation, and Award

For a fixed-price contract, the process ends with the selection of the least expensive, technically qualified firm. For a cost reimbursement contract, once a firm has been selected, additional details still need to be negotiated before contract award. Any cost-related provision can be negotiated, including, but not limited to, the number of labor hours, travel expenses, overhead rates, and other direct costs. The question of fee, which is an amount in addition to the basic contract cost, needs to be settled. The fee can be a fixed amount specified in the contract, providing the contract requirements are met, or can vary depending on regular evaluations of contractor performance. The method of addressing inflation or escalating costs is another area that is negotiated. Following the completion of negotiations, the award takes place and work can begin on the contract.

Contract Management and Administration

Contract administration consists of all activities that take place from contract award until contract retirement. NASA has in place a large number of procedures that ensure that its contracts are managed efficiently and legally. For a procurement of an item, the delivery of that item may be the only major requirement. However, for administering the procurement of complicated systems or services, the government provides considerable oversight, and the contractor is responsible for providing regular information to the government regarding cost and progress of work. The government reviews and evaluates this information and may find that revisions to the contract or changes in project plans are necessary as a result of what these progress reports reveal. NASA employs a number of individuals who are responsible for contract administration.

Definition of Terms

The following information is from NASA Annual Procurement Reports:

Direct Actions (Direct Awards). Procurement actions placed directly with business firms or educational and nonprofit institutions or organizations. The term excludes procurement actions placed with or through other government agencies.

Intergovernmental. Procurement actions placed with or through other government agencies, except orders placed under Government Services Administration (GSA) Federal Supply Schedule contracts and awards to minority enterprises through the Small Business Administration under Section 8(a) of the Small Business Act.

Modification. Any written alteration in the specifications, delivery point, rate of delivery, contract period, price, quantity, or other contract provision of an existing contract, whether accomplished by unilateral

action in accordance with a contract provision or by mutual action of the parties to the contract. It includes (a) bilateral actions, such as supplemental agreements, and (b) unilateral actions, such as change orders, notices of termination, and notices of the exercise of an option.

Competitive. Procurements in which offers are received from at least two responsible offerors capable of satisfying the government's requirements wholly or partially, and the award or awards are made on the basis of price, design, or technical competition.

Other Than Competitive. Procurements in which an offer was received from only one responsible offeror capable of satisfying the government's requirements wholly or partially (includes contracts resulting from unsolicited proposals).

Net Value. The net amount of obligations resulting from debit and credit procurement actions.

Procurement Action (Award). Any contractual action to obtain supplies, services, or construction that obligates or de-obligates funds, including:

1. Letter contracts or other preliminary notices of negotiated awards
2. Definitive contracts, including purchase orders
3. Orders under GSA Federal Supply Schedule contracts, basic order agreements, and against indefinite delivery type contracts
4. Intragovernmental
5. Grants
6. Cooperative and Space Agreements
7. Supplemental agreements, change orders, administrative changes, and terminations to existing procurements

Small Business. For purposes of government procurement, a profit-making concern, including its affiliates, which is independently owned and operated, is not dominant in its field, and further qualifies under the size standards criteria of the Small Business Administration that are published under Title 13 of the Code of Federal Regulations and in the FAR, Part 19, Subpart 19.1. The applicable size standard is prescribed in each NASA procurement solicitation.

The procurement tables (Tables 8–15 through 8–47) at the end of this chapter provide information on NASA's procurement activities. The data have been taken from the agency's Annual Procurement Reports.

Table 8–1. NASA’s Budget Authority as a Percentage of the Total Federal Budget

FY	Percentage
1979	0.9
1980	0.8
1981	0.8
1982	0.8
1983	0.8
1984	0.8
1985	0.8
1986	0.7
1987	0.8
1988	0.9

Source: Historical Tables, Budget of the United States Government, Fiscal Year 1990.

Table 8–2. NASA Appropriations by Appropriation Title and Fiscal Year and Percentage Change (in millions of dollars)

Fiscal Year	R&D	R&PM	SFC&DC	CofF	Total	Percentage Change
1979	3,477.2	934.1	—	147.5	4,558.8	12.2
1980	4,091.1	996.2	—	156.1	5,243.4 <i>a</i>	15.0
1981	4,336.3	1,071.4	—	115.0	5,522.7 <i>b</i>	5.3
1982	4,740.9	1,103.3	—	95.8	5,940.0	7.6
1983	5,542.8	1,197.4	—	97.5	6,837.7 <i>c</i>	15.1
1984	2,011.9	1,238.5	3,791.6	135.5	7,177.5	5.0
1985	2,468.1	1,332.3	3,601.8	150.0	7,552.2 <i>d</i>	5.2
1986	2,756.8	1,362.0	3,397.9	139.3	7,756.0	2.7
1987	3,127.7	1,425.0	5,715.0	166.3	10,434.0	34.5
1988	3,374.2	1,495.7	3,908.3	178.3	8,956.5	–14.2
Total	35,927.0	12,155.9	20,414.6	1,381.3	27,146.5	

a Reflects supplemental appropriation.

b Reflects supplemental appropriation.

c Reflects supplemental appropriation.

d Reflects supplemental appropriation.

Source: NASA Chronological Budget History (1979–1988).

Table 8-3. NASA's Budget History (1979-1988) (in millions of dollars)

Fiscal Year/ Appropriation Title	Request	Authorization	Appropriation
1979			
R&PM	942.6	940.0	934.1
R&D	3,490.1	3,522.6	3,477.2
CofF	185.0	150.0	147.5
Total	4,585.2 <i>a</i>	4,612.6 <i>b</i>	4,558.8
1980			
R&PM	1,011.2	1,001.2	996.2
R&D	4,122.5	3,838.5	4,091.1
CofF	157.6	157.6	156.1
Total	5,291.3 <i>c</i>	4,997.3 <i>d</i>	5,243.4 <i>e</i>
1981			
R&PM	1,033.2	1,933.2	1,071.4
R&D	4,364.5	4,436.8	4,336.3
CofF	120.0	118.0	115.0
Total	5,517.7 <i>f</i>	5,587.9	5,522.7 <i>g</i>
1982			
R&PM	1,114.3	1,114.2	1,103.3
R&D	4,903.1	4,953.8	4,740.9
CofF	104.8	104.1	95.8
Total	6,122.2 <i>h</i>	6,172.2	5,940.0
1983			
R&PM	1,178.9	1,168.9	1,197.4
R&D	5,334.0	5,504.0	5,542.8
CofF	100.0	100.0	97.5
Total	6,612.9	6,772.9	6,837.7 <i>i</i>
1984			
R&PM	1,247.5	1,242.5	1,238.5
R&D	5,708.5	5,833.0	2,011.9
SFC&DC	—	—	3,791.6
CofF	150.5	142.1	135.5
Total	7,106.5	7,267.6	7,177.5
1985			
R&PM	1,331.0	1,316.0	1,332.3
R&D	2,400.1	2,475.1	2,468.1
SFC&DC	3,600.3	3,585.3	3,601.8
CofF	160.0	150.0	150.0
Total	7,491.4	7,526.4	7,552.2 <i>j</i>

Table 8-3 continued

Fiscal Year/ Appropriation Title	Request	Authorization	Appropriation
1986			
R&PM	1,345.0	1,367.0	1,362.0
R&D	2,881.8	2,786.8	2,756.8
SFC&DC	3,509.9	3,372.9	3,397.9
CofF	149.3	139.3	139.3
Total	7,886.0	7,666.0	7,756.0
1987			
R&PM	1,425.0	1,425.0	1,425.0
R&D	3,032.1	3,112.7	3,127.7
SFC&DC	3,343.0	3,899.0	5,715.0
CofF	166.3	161.3	166.3
Total	7,996.4 <i>k</i>	8,598.0	10,434.0
1988			
R&PM	1,598.0	1,593.0	1,495.7
R&D	3,623.2	3,719.0	3,374.2
SFC&DC	4,092.3	4,045.3	3,908.3
CofF	195.5	216.5	178.3
Total	9,509.0 <i>l</i>	9,573.8	8,956.5

a Includes supplemental request and rescission.

b Reflects supplemental authorization.

c Amended budget request; reflects supplemental request.

d Reflects supplemental authorization.

e Reflects supplemental appropriation.

f Amended budget request.

g Reflects supplemental appropriation.

h Amended budget request.

i Reflects supplemental appropriation.

j Reflects supplemental appropriation.

k Amended budget request.

l Amended budget request.

Source: Table 8-1 and NASA Chronological Budget History (1979-1988).

Table 8-4. Authorizations and Appropriations Compared With Budget Requests (in millions of dollars)
 Amounts and Percentages Cut (or Added) by Congress

	Research and Program Management		Research and Development		Space Flight, Control, and Data Communications		Construction of Facilities		Total	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
FY 1979										
Auth.	-2.6	-0.3	32.5	0.9	—	—	-2.5	-1.4	27.4	0.6
Appr.	-8.5	-0.9	-12.9	-0.4	—	—	-5.0	-2.7	-26.4	-0.6
FY 1980										
Auth.	-10.0	-1.0	-284.0	-6.9	—	—	0.0	0.0	-294.0	-5.6
Appr.	-15.0	-1.5	-31.4	-0.8	—	—	-1.5	-1.0	-47.9	-0.9
FY 1981										
Auth.	0.0	0.0	72.3	1.7	—	—	-2.0	-1.7	70.3	1.3
Appr. <i>a</i>	0.0	0.0	0.0	0.0	—	—	0.0	0.0	0.0	0.0
FY 1982										
Auth.	0.0	0.0	50.7	1.2	—	—	-0.7	-0.7	50.0	0.8
Appr.	-11.0	-1.0	-162.2	-3.3	—	—	-9.0	-8.6	-182.2	-2.3
FY 1983										
Auth.	-10.0	-0.8	170.0	3.2	—	—	0.0	0.0	160.0	2.4
Appr.	-10.0	-0.8	208.0	3.9	—	—	-2.5	-2.5	196.3	3.0
FY 1984										
Auth.	-5.0	-0.4	174.5	3.1	—	—	-8.4	-5.6	161.1	2.3
Appr.	-9.0	-0.7	-3,696.6	-64.8	3,791.6	66.4	-15.0	-10.0	-90.1	3.0

Table 8-4 continued

Amounts and Percentages Cut (or Added) by Congress											
Research and Program Management		Research and Development		Space Flight, Control, and Data Communications		Construction of Facilities		Total			
Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage		
FY 1985											
Auth.	-15.0	-1.1	75.0	3.1	-15.0	-0.4	-10.0	-6.3	35.0	0.5	
Appr.	1.3	0.1	68.0	2.8	1.5	<i>b</i>	-10.0	-6.3	60.8	0.8	
FY 1986											
Auth.	22.0	1.6	-95.0	-3.3	-137.0	-3.9	-10.0	-6.6	-220.0	-2.8	
Appr.	17.0	1.2	-125.0	-4.3	-112.0	-3.2	-10.0	-6.6	-130.0	-1.6	
FY 1987											
Auth.	0.0	0.0	80.6	2.7	556.0	16.6	-5.0	-3.0	631.6	7.9	
Appr.	0.0	0.0	95.6	3.2	2,372.0	70.1	0.0	0.0	2,467.6	73.8	
FY 1988											
Auth.	-5.0	—	95.8	2.3	-47.0	-1.1	21.0	10.7	64.8	0.7	
Appr.	-102.3	-6.4	-249.0	-6.9	-184.0	-4.5	-17.2	-8.8	-552.5	-5.8	

a Difference from revised budget estimate.

b Less than 0.05 percent.

Source: NASA Chronological History (1979-1988).

Table 8-5. Budget Requests, Authorizations, Appropriations, and Obligations (in millions of dollars)

Fiscal Year	Budget Request	Authorization	Appropriation	Obligation	Expenditure
1979	4,585.2	4,612.6	4,558.8	4,557.5	4,196.5
1980	5,291.3	4,997.3	5,243.4	5,098.1	4,851.6
1981	5,517.7	5,587.9	5,522.7	5,606.2	5,421.2
1982	6,122.2	6,172.2	5,940.0	5,946.7	6,035.4
1983	6,612.9	6,772.9	6,837.7	6,732.9	6,663.9
1984	7,106.5	7,267.6	7,177.5	7,135.2	7,047.6
1985	7,491.4	7,526.4	7,552.2	7,638.4	7,317.7
1986	7,886.0	7,666.0	7,756.0	7,463.7	7,403.5
1987	7,996.4	8,598.0	10,434.0	8,603.7	7,591.4
1988	9,509.0	9,573.8	8,956.5	9,914.7	9,091.6
Total	63,348.6	68,774.7	69,978.8	68,688.1	65,620.4

Source: NASA Pocket Statistics, January 1989, and Table 8-3.

Table 8-6. Research and Program Management Funding by Installation (in millions of dollars; at end of fiscal year)

Installation	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Ames Research Center	62.7	67.4	94.8	101.1	107.2	113.9	120.3	123.3	133.6	165.2
Dryden Flight Research Center	19.1	20.4	—	—	—	—	—	—	—	—
Goddard Space Flight Center	127.9	133.5	162.4	169.1	180.6	186.8	196.9	199.5	213.9	242.8
Johnson Space Center	152.9	164.7	176.1	186.5	195.2	201.1	214.8	206.0	227.9	282.0
Kennedy Space Center	123.3	133.2	150.2	156.0	161.3	172.6	184.5	192.2	200.2	242.8
Langley Research Center	106.6	114.0	120.8	126.6	132.7	140.0	147.1	145.6	154.3	177.9
Lewis Research Center	87.5	94.8	99.9	106.4	118.8	128.7	137.4	143.4	151.7	181.9
Marshall Space Flight Center	149.0	155.9	165.0	172.1	184.3	189.9	198.1	194.2	212.0	237.5
National Space Technology Laboratories/Stennis	4.5	4.9	5.5	6.6	6.3	10.2	10.7	11.2	12.0	20.5
Wallops Flight Center (Facility)	15.8	17.7	—	—	—	—	—	—	—	—
NASA Headquarters	84.5	89.6	96.4	109.8	111.0	108.2	116.9	74.0	139.4	212.5
R&PM Applied to Shuttle Development				49.0						
Inspector General						4.7	5.2			
Total R&PM	933.8	996.0	1,071.01	1,183.0	1,197.4	1,256.1	1,331.9	1,341.5	1,451.5	1,762.2

Table 8-7. Research and Development Funding by Installation (in millions of dollars; at end of fiscal year)

Installation	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Ames Research Center	141.5	147.9	160.4	175.3	180.1	189.7	217.3	245.8	282.1	261.2
Dryden Flight Research Center	13.1	16.6	—	—	—	—	—	—	—	—
Goddard Space Flight Center	519.3	552.0	511.2	744.0	730.1	361.6	399.0	461.6	483.9	508.0
Jet Propulsion Laboratory	235.1	315.4	258.7	316.2	304.9	248.3	338.7	412.7	452.4	486.3
Johnson Space Center	1,151.2	1,388.0	1,523.3	1,598.5	1,550.0	175.8	239.7	244.7	325.1	327.5
Kennedy Space Center	235.5	300.6	365.1	486.1	529.3	53.0	45.7	69.0	53.8	86.0
Langley Research Center	138.8	170.9	142.9	129.6	131.0	140.1	176.0	173.0	217.6	197.1
Lewis Research Center	149.2	170.7	163.4	175.1	281.1	281.9	311.4	259.9	277.8	254.8
Marshall Space Flight Center	747.8	863.8	996.0	1,200.0	1,624.2	447.1	500.0	538.4	721.1	744.4
National Space Technology Laboratories/Stennis	15.4	9.4	8.5	9.9	8.3	9.6	10.8	9.6	11.8	19.1
Wallops Flight Center (Facility)	16.6	17.5	—	—	—	—	—	—	—	—
NASA Headquarters	115.7	135.9	144.5	137.2	239.7	160.7	179.6	204.5	328.1	374.6
Total R&D	3,477.2	4,088.1	4,335.5	4,738.0	5,539.0	2,064.2	2,468.1	2,619.3	3,153.7	3,279.9

Table 8–8. Space Flight Control and Data Communications Funding by Installation (in millions of dollars; at end of fiscal year)

Installation	1984	1985	1986	1987	1988
Ames Research Center	9.8	12.3	15.4	16.3	15.4
Dryden Flight Research Center	—	—	—	—	—
Goddard Space Flight Center	431.0	431.1	331.2	416.9	464.3
Jet Propulsion Laboratory	97.2	111.0	116.2	124.3	131.5
Johnson Space Center	1,303.2	1,159.7	988.3	2,337.9	908.8
Kennedy Space Center	439.9	383.1	448.5	642.1	719.7
Langley Research Center	0.2	0.1	0.1	0.1	0.1
Lewis Research Center	2.0	3.4	3.0	5.1	3.7
Marshall Space Flight Center	1,272.9	1,223.5	1,543.7	1,580.1	1,261.2
National Space Technology Laboratories/Stennis	0.8	6.3	8.5	15.8	16.2
Wallops Flight Center (Facility)	—	—	—	—	—
NASA Headquarters	240.4	263.7	211.0	860.9	202.9
Total SFC&DC	3,772.3	3,544.2	3,665.9	5,999.5	3,805.7

Source: NASA Budget Estimates (1979–1988).

Table 8-9. Construction of Facilities Funding by Facility (in millions of dollars; at end of fiscal year)

Facility	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Ames Research Center	9.7	2.9	13.9	18.5	3.5	4.7	13.6	7.8	22.2	23.4
Dryden Flight Research Center	—	—	—	—	—	—	—	—	—	—
Goddard Space Flight Center	5.6	—	—	—	4.7	—	2.2	3.6	15.2	19.8
Jet Propulsion Laboratory	4.6	—	3.5	1.0	—	4.3	12.2	9.4	16.3	7.2
Johnson Space Center	—	—	—	0.7	—	2.3	3.2	—	18.4	11.1
Kennedy Space Center	—	5.8	0.8	1.7	10.7	58.6	36.9	—	11.9	26.9
Langley Research Center	6.5	8.0	20.8	3.0	16.2	9.5	13.8	4.7	17.9	7.2
Lewis Research Center	6.1	5.7	10.4	1.2	3.9	10.6	—	—	12.1	22.7
Marshall Space Flight Center	—	3.5	—	—	17.8	11.7	1.6	—	10.1	19.2
National Space Technology Laboratories/Stennis	—	—	—	—	—	—	3.3	—	6.2	4.9
Wallops Flight Center (Facility)	—	1.1	—	—	—	—	—	—	—	—
Large Aeronautical Facilities	56.1	45.9	—	—	—	—	—	—	—	—
Various Locations	—	—	3.4	9.8	—	—	13.8	16.7	22.0	8.6
Space Shuttle Facilities	31.1	27.8	10.1	35.1	—	—	—	—	—	—
Space Shuttle Payload Facilities	—	4.3	1.6	—	—	—	—	—	—	—
Facilities Planning and Design	10.7	14.0	10.0	10.0	—	—	—	—	17.0	16.0
Repair	—	12.0	15.0	12.8	—	—	—	—	—	—
Minor Construction	4.2	3.5	4.0	2.3	—	—	—	—	—	—
Rehabilitation and Modification	12.8	19.8	19.0	17.7	—	—	—	—	—	—
Total Coff	147.5	156.1	117.0	113.7	101.3	155.5	150.0	133.3	169.3	178.3

Source: Annual NASA Budget Estimates.

Table 8-10. Research and Development Appropriation by Program (in millions of dollars)

Program	1979 a	1980 b	1981	1982	1983	1984	1985	1986	1987	1988
Space Station							155.5	205.0	410.0	425.0
Industrial Space Facility										
Space Shuttle c	1,995.0			d	1,769.0	427.4	407.4	439.0	507.5	549.6
Space Flight Operations	679.2			e	1,796.0	f				
Expendable Launch Vehicles	54.4			31.2	42.8	g				
Physics and Astronomy	323.7			323.5	461.7	578.6	680.2	605.4	528.5	577.1
Lunar and Planetary h	175.6			205.0	180.4	205.4	293.9	354.0	374.3	332.3
Life Sciences	42.2			39.5	55.7	59.0	63.3	68.0	69.7	74.6
Space Applications	331.6			328.2	341.3	293.0	384.1	519.8	578.1	641.3
Technology Utilization	8.8			8.0	4.0	9.0	9.5	11.1	15.7	18.3
Commercial Use of Space								17.0	25.6	31.7
Aeronautical Research and Technology	272.2			264.8	280.0	302.3	342.4	354.0	376.0	377.0
Transatmospheric Research and Technology									40.0	53.0
Space Research and Technology Safety, Reliability, and Quality Assurance	110.7			111.0	123.0	138.0	154.0	168.0	185.2	235.0
Advanced Systems									17.1	16.2
Energy Technology Applications	1.9			—	i				j	18.1
Tracking and Data Acquisition	341.1			402.1	508.9	14.2 k	15.3	16.2		

Table 8-10 continued

Program	1979 a	1980 b	1981	1982	1983	1984	1985	1986	1987	1988
Supplemental	185.0	285.0	<i>l</i>							
Recession		-1.4								
Undistributed										
Total	3,477.2	4,091.1	4,336.3	4,740.9	5,542.8	2,011.9	2,468.1	2,756.8	3,127.7	3,374.2
<i>a</i>	FY 1979 appropriations were undistributed (no amounts specified for particular programs).									
<i>b</i>	FY 1980 appropriations were undistributed (no amounts specified for particular programs).									
<i>c</i>	Renamed Space Transportation Capability Development beginning in FY 1984. See Table 8-11 for SFC&DC Shuttle appropriations.									
<i>d</i>	Appropriated amount for Space Shuttle budget category not specified.									
<i>e</i>	Appropriated amount for Space Flight Operations budget category not specified.									
<i>f</i>	Budget category moved to SFC&DC appropriation.									
<i>g</i>	Budget category eliminated.									
<i>h</i>	Renamed Planetary Exploration beginning in FY 1981.									
<i>i</i>	Energy Technology Applications budget category eliminated.									
<i>j</i>	Budget category eliminated.									
<i>k</i>	Remaining Tracking and Data Acquisition appropriation moved to SFC&DC appropriation.									
<i>l</i>	Supplemental appropriation amounts incorporated into individual budget categories.									

*Table 8–11. Space Flight Control and Data Communications
Appropriation by Program (in millions of dollars)*

Installation	1984	1985	1986	1987	1988
Space Transportation Capability					
Development (STCD) <i>a</i>	1,500.0	1,510.6	976.5	2,984.4	1,100.6
STCD Reserve	45.0	—			
Space Transportation System					
Operations	1,570.6	1,339.0	1,725.1	1,867.7	1,885.8
Tracking and Data Acquisition <i>b</i>	676.0	795.7	701.3	862.9	893.9
General Reduction		–43.5	–5.0		
Total	3,791.6	3,601.8 <i>c</i>	3,397.9	5,715.0	3,908.3

a Renamed Shuttle Production and Operational Capability beginning in FY 1985.

b Renamed Space and Ground Network, Communications and Data Systems beginning in FY 1986.

c Supplemental appropriation amounts incorporated into individual budget categories.

Table 8-12. Research and Development Funding by Program (in millions of dollars)

Program	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Space Station							155.5	184.7	420.0	489.5
Industrial Space Facility										
Space Transportation										
Systems <i>a</i>	2,011.6	2,681.1	2,728.6	3,089.9	3,563.0	431.7	391.4	403.9	491.1	593.4
Space Shuttle/Capability										
Development	1,638.3	1,943.0	1,995.0	2,623.4	2,141.3	—				
Operations	299.6	683.7	679.2	466.5	1,421.7	—				
Expendable Launch Vehicles	73.6	54.4	54.4	— <i>b</i>						
Space Science <i>c</i>	505.4	562.5	881.8	896.2	1,060.1	1,157.0	1,404.5	1,476.5	1,547.6	1,581.8
Physics and Astronomy	282.9	344.7	323.7	322.4	470.3	567.6	677.2	569.3	554.0	614.4
Life Sciences	40.1	42.2	42.2	39.5	55.7	58.0	62.3	66.1	71.8	72.0
Planetary Exploration	182.4	175.6	175.6	210.0	186.4	217.4	290.9	353.6	359.2	327.7
Space and Terrestrial										
Applications	283.9	365.3	—		—					
Space Applications	274.8	353.5	331.5	324.3						
Technology Transfer	9.1	11.8	8.8							
Solid Earth Observations					128.9	76.4	57.6	70.9	72.4	<i>d</i>
Environmental Observations					156.9	162.0	212.7	271.6	318.3	389.2
Materials Processing					22.0	25.6	27.0	31.0	47.3	62.7
Communications					32.4	41.1	60.6	96.4	103.4	94.8
Information Systems					7.5	8.9	16.2	17.6	21.2	20.8
Commercial Programs				8.0	9.0	9.0	9.5	26.8	40.9	48.7
Technology Utilization								10.6	15.7	19.0
Commercial Use of Space								16.2	25.2	29.7

Table 8-12 continued

Program	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Aeronautical and Space Technology	376.4	390.8	384.0	375.8	404.5	452.3	492.4	488.7	625.0	606.7
Aeronautical Research and Technology	264.1	276.2	271.4	264.8	280.0	315.3	342.4	337.3	374.0	332.9
Transatmospheric Research and Technology									45.0	52.5
Space Research and Technology	107.3	110.7	110.7	111.1	124.5	137.0	150.0	151.4	206.0	221.3
Energy Technology	5.0	3.9	1.9	— ^e	—					
Safety, Reliability, and Quality Assurance									12.0	
Tracking and Data Acquisition ^{f, g}	299.9	341.1	339.9	402.1	485.5	14.2	14.8	15.5	17.1	17.9
Total	3,477.2	4,340.8	4,334.3	4,772.0	5,519.1	2,064.2	2,468.1	2,596.1	3,153.7	3,279.9

^a Renamed Space Transportation Capability Development. Remainder of funding moved to SFC&DC appropriation.

^b Program eliminated.

^c Merged with the Office of Space and Terrestrial Applications in FY 1983 to become the Office of Space Science and Applications.

^d Programs included in Earth Science budget category.

^e Program eliminated.

^f Renamed Tracking and Data Advanced Systems in FY 1984. Remainder of funding moved to SFC&DC appropriation.

^g Renamed Space and Ground Network, Communications and Data Systems beginning in FY 1986.

Table 8–13. Space Flight Control and Data Communications Funding by Program (in millions of dollars)

Installation	1984	1985	1986	1987	1988
Space Transportation Capability					
Development <i>a</i>	1,646.3	1,484.5	1,365.3	3,408.1	1,092.7
Space Transportation System					
Operations	1,452.0	1,314.0	1,640.2	1,746.0	1,833.6
Tracking and Data Acquisition <i>b</i>	674.0	795.7	660.4	845.4	879.4
Total	3,772.3	3,594.2	3,665.9	5,999.5	3,805.7

a Renamed Shuttle Production and Operational Capability beginning in FY 1985.

b Renamed Space and Ground Network, Communications and Data Systems beginning in FY 1986.

Source: NASA Budget Estimates (1986–1990).

Table 8–14. NASA Budget Authority in Millions of Real-Year Dollars and in Equivalent FY 1996 Dollars

Fiscal Year	NASA Total (Real-Year Dollars)	1996 Deflator	Total (Inflated 1996 Dollars)
1979	4,596	2.0456	9,401
1980	5,240	1.8763	9,832
1981	5,518	1.7031	9,398
1982	6,044	1.5851	9,580
1983	6,875	1.5218	10,463
1984	7,458	1.4577	10,871
1985	7,573	1.4041	10,633
1986	7,807	1.3636	10,645
1987	10,923	1.3243	14,465
1988	9,062	1.2779	11,581

Source: Aeronautics and Space Report of the President, 1996 (Washington, DC: U.S. Government Printing Office, 1997), Appendix E-1A and E-1B.

Table 8–15. Total Number of Procurement Actions by Kind of Contractor: FY 1979–1988 (in thousands)

Kind of Contractor	Number	Percentage
Business Firms	1,174.8	87.1
Small Business Firms	797.1	68.4
Large Business Firms	377.7	31.6
Nonprofit Institutions	20.3	1.5
Educational Institutions	47.5	3.5
Jet Propulsion Laboratory	19.0	1.4
Government Agencies	86.1	6.4
Contractors Outside the United States	3.4	0.25
Total	1,351.1	100.0

Table 8-16. Number of Procurement Actions by Kind of Contractor and Fiscal Year (in thousands)

Kind of Contractor	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Business Firms	130.8	87.8	142.5	87.2	152.2	86.5	136.4	82.7	109.1	86.4
Nonprofit Institutions	2.0	1.3	1.9	1.2	2.1	1.2	2.2	1.3	2.2	1.7
Educational Institutions	3.6	2.2	4.1	2.5	4.3	2.4	4.1	2.5	4.4	3.5
Jet Propulsion Laboratory	1.6	1.1	1.6	1.0	1.8	1.1	2.1	1.3	4.7	3.7
Government Agencies	10.5	7.1	12.9	7.9	15.1	8.6	19.8	12.0	5.5	4.4
Contractors Outside the United States	0.4	0.3	0.4	0.2	0.4	0.2	0.3	0.2	0.3	0.2
Total	148.9	100.0	163.4	100.0	175.9	100.0	164.9	100.0	126.3	100.0
Kind of Contractor	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Business Firms	104.7	88.6	107.7	89.1	98.3	88.1	98.4	87.8	94.7	87.0
Nonprofit Institutions	2.0	1.7	2.2	1.8	2.0	1.8	1.9	1.5	1.7	1.6
Educational Institutions	4.4	3.8	5.1	4.2	5.5	4.9	5.7	5.1	6.3	5.8
Jet Propulsion Laboratory	1.8	1.5	1.2	1.0	1.4	1.3	1.4	1.3	1.4	1.3
Government Agencies	5.0	4.2	4.4	3.6	4.1	3.7	4.3	3.8	4.5	4.1
Contractors Outside the United States	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3
Total	118.2	100.0	120.9	100.0	111.6	100.0	112.1	100.0	108.9	100.0

Table 8-17. Number of Procurement Actions Awarded to Small and Large Business Firms by Fiscal Year (in thousands)

Kind of Business	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Small Business Firms	82.9	63.4	87.8	61.6	98.9	65.0	90.7	66.5	77.4	70.9
Large Business Firms	47.9	36.6	54.7	38.4	53.3	35.0	45.7	33.5	31.7	29.1
Total	1,30.8	100.0	142.5	100.0	152.2	100.0	136.4	100.0	109.1	100.0

Kind of Business	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Small Business Firms	74.1	70.8	75.3	69.9	69.8	71.0	71.5	72.7	68.7	72.5
Large Business Firms	30.6	29.2	32.4	30.1	28.5	29.0	26.9	27.3	26.0	27.5
Total	104.7	100.0	107.7	100.0	98.3	100.0	98.4	100.0	94.7	100.0

Table 8–18. Total Procurement Award Value by Kind of Contractor and Method of Procurement: FY 1979–1988 (in millions of dollars)

Kind of Contractor	Number	Percentage
Business Firms	1,174.8	87.1
Business Firms	54,746.8	79.2
Small Business Firms	5,491.7	10.0
Large Business Firms	49,255.1	90.0
Nonprofit Institutions	1,068.7	1.5
Educational Institutions	2,356.8	3.4
Jet Propulsion Laboratory	6,162.3	8.9
Government Agencies	4,365.01	6.3
Contractors Outside the United States	445.3	0.6
Total	69,144.9	100.0

Method of Procurement (Business)	Number	Percentage
Business Firms	40,997.6	79.3

Table 8-19. Value of Awards by Kind of Contractor and Fiscal Year (in millions of dollars)

Kind of Contractor	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Business Firms	130.8	87.8	142.5	87.2	152.2	86.5	136.4	82.7	109.1	86.4
Business Firms	3,416.4	81.1	3,868.3	79.9	4,272.8	79.0	4,805.6	81.7	5,586.0	82.2
Nonprofit Institutions	50.8	1.2	82.2	1.7	155.1	2.9	108.8	1.9	102.5	1.5
Educational Institutions	147.2	3.5	177.0	3.7	192.5	3.6	187.0	3.2	211.3	3.1
Jet Propulsion Laboratory	338.6	8.0	397.2	8.2	410.8	7.6	426.3	7.3	454.9	6.7
Government Agencies	221.4	5.3	271.8	5.6	321.9	6.0	308.1	5.2	394.2	5.8
Contractors Outside the United States	37.4	0.9	46.1	1.0	55.2	1.0	47.9	0.8	47.9	0.7
Total	4,211.8	100.0	4,842.6	100.0	5,408.3	100.0	5,883.7	100.0	6,796.8	100.0
Kind of Contractor	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Business Firms	5,967.4	81.1	6,652.9	80.2	6,356.0	77.7	6,540.5	76.0	7,274.9	76.2
Nonprofit Institutions	98.6	1.3	103.1	1.2	119.0	1.5	119.1	1.4	129.5	1.3
Educational Institutions	222.6	3.0	256.9	3.1	276.6	3.4	315.4	3.7	370.3	3.9
Jet Propulsion Laboratory	533.1	7.3	724.6	8.7	891.3	10.9	1,005.6	11.7	979.9	10.3
Government Agencies	494.3	6.7	525.1	6.3	489.7	6.0	594.9	6.9	734.6	7.7
Contractors Outside the United States	38.1	0.5	35.4	0.4	47.1	0.6	34.3	0.4	55.9	0.6
Total	7,354.1	100.0	8,298.0	100.0	8,179.7	100.0	8,609.8	100.0	9,545.1	100.0

Table 8-20. Value of Awards to Small and Large Business Firms by Fiscal Year (in millions of dollars)

Kind of Business	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Small Business Firms	325.4	9.5	384.6	9.9	409.4	9.6	430.1	9.0	482.3	8.6
Large Business Firms	3,091.0	90.5	3,483.7	90.1	3,863.4	90.4	4,375.5	91.0	5,103.7	91.4
Total	3,416.4	100.0	3,868.3	100.0	4,272.8	100.0	4,805.6	100.0	5,586.0	100.0

Kind of Business	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Small Business Firms	556.2 <i>a</i>	9.3	644.7 <i>b</i>	9.7	671.3 <i>c</i>	10.6	786.3 <i>d</i>	12.0	801.4 <i>e</i>	11.0
Large Business Firms	5,411.2	90.7	6,008.2	90.3	5,684.7	89.4	5,754.2	88.0	6,437.5	89.0
Total	5,967.4	100.0	6,652.9	100.0	6,356.0	100.0	6,540.5	100.0	7,274.9	100.0

a This includes \$108.1 million awarded to small minority firms under authority of section 8(a) of the Small Business Act and \$5 million through the Small Business Innovation Research program.

b This includes \$127.1 million awarded to small minority firms under authority of section 8(a) of the Small Business Act and \$29.5 million through the Small Business Innovation Research program.

c This includes \$148.3 million awarded to small minority firms under authority of section 8(a) of the Small Business Act and \$36 million through the Small Business Innovation Research program.

d This includes \$172.5 million awarded to small minority firms under authority of section 8(a) of the Small Business Act and \$32.2 million through the Small Business Innovation Research program.

e This includes \$172.6 million awarded to small minority firms under authority of section 8(a) of the Small Business Act and \$47.3 million through the Small Business Innovation Research program.

Table 8-21. Value of Awards to Business Firms by Kind of Procurement and Fiscal Year (in millions of dollars)

Kind of Procurement	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Competitive	2,541.1	74.4	2,858.1	73.9	3,127.7	73.2	3,436.5	71.5	3,845.3	68.8
Noncompetitive	875.3	25.6	1,010.2	26.1	1,145.1	26.8	1,369.1	28.5	1,740.7	31.2
Total	3,416.4	100.0	3,868.3	100.0	4,272.8	100.0	4,805.6	100.0	5,586.0	100.0

Kind of Procurement	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Competitive	4,286.6	71.8	5,030.2	77.1	4,950.1	67.7	5,031.7	76.5	5,890.3	80.1
Noncompetitive	1,680.8	28.2	1,495.7 <i>a</i>	22.9	2,143.1	29.3	1,445.7	22.0	1,279.4	17.4
Follow-on	—	—	—	—	217.1	3.0	97.9	1.5	180.7	2.5
Total	5,967.4	100.0	6,525.9	100.0	7,310.3 <i>b</i>	100.0	6,575.3 <i>c</i>	100.0	7,350.4 <i>d</i>	100.0

a This does not include 8(a) awards.

b This amount does not include \$869.4 million in awards that were not available for competition.

c The \$6,575.3 million does not include \$2,034.5 million in awards that were not available for competition.

d The \$7,350.4 million does not include \$2,194.7 million in awards that were not available for competition.

Table 8-22. Value and Percentage of Direct Awards to Business Firms by Contract Pricing Provision: 1979-1988
(in millions of dollars) *a*

Pricing Provision	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Firm-Fixed-Price	466.6	14	454.5	12	508.0	12	551.2	12	648.6	12
Incentive	2,244.1	72	2,680.4	72	214.2	5	277.2	6	378.4	7
Cost-Plus-Award-Fee <i>b</i>	—	—	—	—	2,887.2	70	3,219.7	69	3,625.0	67
Cost-Plus-Fixed-Fee	440.1	13	432.4	12	366.6	9	405.6	8	421.8	8
Other	149.5	5	171.1	4	170.2	4	221.5	5	322.1	6
Total	3,300.3	100	3,738.4	100	4,146.2	100	4,675.2	100	5,395.9	100

Pricing Provision	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Firm-Fixed-Price	709.7	12	863.7	13	770.1	12	849.7	13	853.5	12
Incentive	710.5	12	1,650.1	26	1,981.7	32	1,425.7	22	1,347.2	19
Cost-Plus-Award-Fee	3,528.8	61	2,985.2	46	2,642.2	43	3,294.1	52	4,007.2	56
Cost-Plus-Fixed-Fee	472.3	8	587.8	9	647.8	10	696.1	11	766.0	11
Other	401.5	7	400.3	6	152.2	3	111.2	2	121.0	2
Total	5,822.8	100	6,487.1	100	6,194.0	100	6,376.8	100	7,094.9	100

a Excludes smaller procurements, generally those less than \$10,000.

b Included with Incentive category through FY 1980.

Table 8-23. Number and Percentage of Procurement Actions in Direct Awards to Business Firms by Contract Pricing: 1979-1988

Pricing Provision	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Firm-Fixed-Price	10,679	60	10,823	41	10,518	38	11,537	40	11,563	60
Incentive	2,314	13	11,351	43	13,010	47 <i>a</i>	12,402	43 <i>b</i>	3,469	18 <i>c</i>
Cost-Plus-Award-Fee	—	—	—	—	—	—	—	—	—	—
Cost-Plus-Fixed-Fee	3,560	20	3,432	13	3,598	13	3,750	13	3,469	18
Other	1,246	7	792	3	554	2	1,154	4	771	4
Total	17,799	100	26,398	100	27,680	100	28,843	100	19,272	100

Pricing Provision	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Firm-Fixed-Price	10,220	49	9,377	53	8,217	61	7,981	60	8,114	58
Incentive	6,257	30 <i>d</i>	354	2	269	2	266	2	280	2
Cost-Plus-Award-Fee	—	—	3,185	18	1,212	9	1,330	10	1,539	11
Cost-Plus-Fixed-Fee	3,754	18	3,715	21	3,233	24	3,192	24	3,498	25
Other	626	3	1,026	6	539	4	532	4	560	4
Total	20,857	100	17,692	100	13,470	100	13,301	100	13,991	100

a Includes cost-plus-award-fee procurements.

b Includes cost-plus-award-fee procurements.

c Includes cost-plus-award-fee procurements.

d Includes cost-plus-award-fee procurements.

Table 8-24. Distribution of Prime Contract Awards by State: 1979-1988 (in thousands of dollars)

State	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Alabama	77,813	2.2	81,093	2.1	94,071	2.1	106,352	2.2	117,122	2.1
Alaska	815	a	1,493	a	2,111	a	2,160	a	2,301	a
Arizona	18,854	0.5	32,169	0.8	27,856	0.6	30,213	0.6	29,123	0.5
Arkansas	88	a	189	a	315	a	512	a	47	a
California	1,438,969	41.3	1,721,269	43.5	1,875,403	42.8	2,056,491	42.0	2,131,242	37.6
Colorado	60,232	1.7	92,273	2.3	89,124	2.0	75,959	1.6	153,377	2.7
Connecticut	98,342	2.8	115,330	2.9	112,886	2.6	120,458	2.5	172,209	3.0
Delaware	680	a	584	a	1,072	a	4,461	0.1	1,647	a
District of Columbia	14,277	0.4	11,372	0.3	19,760	0.5	23,850	0.5	30,019	0.5
Florida	360,222	10.3	401,030	10.1	536,684	12.2	633,552	12.9	773,978	13.7
Georgia	7,433	0.2	7,479	0.2	9,132	0.2	7,844	0.2	11,874	0.2
Hawaii	2,632	0.1	4,195	0.1	3,420	0.1	4,467	0.1	5,469	0.1
Idaho	26	a	78	a	253	a	225	a	295	a
Illinois	12,165	0.3	10,670	0.3	11,954	0.3	11,217	0.2	12,658	0.2
Indiana	16,874	0.5	24,810	0.6	18,430	0.4	23,741	0.5	13,577	0.2
Iowa	3,349	0.1	4,516	0.1	3,738	0.1	3,920	0.1	4,076	0.1
Kansas	1,689	a	3,754	0.1	3,896	0.1	4,443	0.1	6,302	0.1
Kentucky	917	a	1,117	a	689	a	1,013	a	1,278	a
Louisiana	133,363	3.8	173,007	4.4	205,045	4.7	265,367	5.4	344,292	6.1
Maine	334	a	120	a	14	a	287	a	278	a
Maryland	257,178	7.4	272,409	6.9	309,600	7.1	360,077	7.3	407,970	7.2
Massachusetts	51,850	1.5	53,264	1.3	56,409	1.3	52,842	1.1	61,548	1.1
Michigan	14,589	0.4	10,524	0.3	14,265	0.3	15,549	0.3	7,317	0.1

Table 8-24 continued

State	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Minnesota	10,679	0.3	8,028	0.2	6,547	0.1	8,186	0.2	6,294	0.1
Mississippi	26,341	0.8	29,083	0.7	30,770	0.7	33,393	0.7	38,451	0.7
Missouri	6,573	0.2	5,865	0.2	6,936	0.2	5,469	0.1	5,759	0.1
Montana	3	<i>a</i>	114	<i>a</i>	164	<i>a</i>	102	<i>a</i>	79	<i>a</i>
Nebraska	135	<i>a</i>	175	<i>a</i>	398	<i>a</i>	261	<i>a</i>	496	<i>a</i>
Nevada	933	<i>a</i>	724	<i>a</i>	1,101	<i>a</i>	1,389	<i>a</i>	568	<i>a</i>
New Hampshire	1,421	<i>a</i>	1,714	<i>a</i>	2,924	0.1	3,357	0.1	4,660	0.1
New Jersey	58,386	1.7	39,497	1.0	41,313	0.9	37,432	0.8	74,102	1.3
New Mexico	17,100	0.5	17,323	0.4	16,132	0.4	23,504	0.5	21,703	0.4
New York	69,360	2.0	52,935	1.3	56,319	1.3	50,063	1.0	51,838	0.9
North Carolina	3,117	0.1	3,773	0.1	4,133	0.1	4,786	0.1	5,701	0.1
North Dakota	—	—	—	—	13	<i>a</i>	10	<i>a</i>	—	—
Ohio	82,632	2.4	90,040	2.3	70,009	1.6	71,587	1.5	78,860	1.4
Oklahoma	1,207	<i>a</i>	2,554	0.1	1,936	<i>a</i>	2,086	<i>a</i>	4,353	0.1
Oregon	2,620	0.1	2,675	0.1	4,222	0.1	3,268	0.1	2,918	0.1
Pennsylvania	98,142	2.8	100,609	2.5	105,715	2.4	112,506	2.3	104,320	1.8
Rhode Island	639	<i>a</i>	1,349	<i>a</i>	1,148	<i>a</i>	1,315	<i>a</i>	1,243	<i>a</i>
South Carolina	550	<i>a</i>	621	<i>a</i>	393	<i>a</i>	204	<i>a</i>	413	<i>a</i>
South Dakota	227	<i>a</i>	273	<i>a</i>	90	<i>a</i>	194	<i>a</i>	324	<i>a</i>
Tennessee	3,898	0.1	4,233	0.1	4,563	0.1	6,953	0.1	7,891	0.1
Texas	306,838	8.8	344,792	8.7	384,300	8.8	448,117	9.1	526,331	9.3
Utah	71,243	2.0	71,898	1.8	85,352	1.9	124,016	2.5	253,518	4.5

Table 8-24 continued

State	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Vermont	152	a	335	a	417	a	388	a	250	a
Virginia	104,436	3.0	114,444	2.9	124,461	2.8	127,904	2.6	157,184	2.8
Washington	41,321	1.2	37,205	0.9	34,786	0.8	22,910	0.5	21,909	0.4
West Virginia	11	a	—	—	34	a	9	a	92	a
Wisconsin	4,713	0.1	4,969	0.1	5,726	0.1	5,409	0.1	9,820	0.2
Wyoming	327	a	248	a	248	a	325	a	518	a
Total <i>b</i>	3,485,896	100.0	3,958,221	100.0	4,386,223	100.0	4,900,143	100.0	5,667,594	100.0

State	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Alabama	291,507	4.8	377,117	5.5	411,466	6.3	463,511	6.8	546,789	7.2
Alaska	1,890	a	1,776	a	2,268	a	3,333	a	2,807	a
Arizona	30,448	0.5	28,993	0.4	25,184	0.3	24,035	0.4	21,061	0.3
Arkansas	214	a	299	a	174	a	393	a	239	a
California	2,149,986	35.1	2,236,531	32.7	1,999,674	30.4	2,224,687	32.8	2,411,400	31.8
Colorado	116,830	1.9	127,455	1.9	113,707	1.7	113,036	1.7	86,641	1.1
Connecticut	177,736	2.9	172,360	2.5	113,527	1.7	162,600	2.4	76,060	1.0
Delaware	2,737	a	1,697	a	1,322	a	2,334	a	3,621	a
District of Columbia	33,307	0.5	37,929	0.6	39,760	0.6	49,275	0.7	56,739	0.7
Florida	816,993	13.3	979,033	14.3	966,303	14.7	682,070	10.0	873,427	11.5
Georgia	15,959	0.3	20,305	0.3	34,813	0.5	26,931	0.4	15,700	0.2
Hawaii	4,780	0.1	5,746	0.1	5,434	0.1	5,507	0.1	6,890	0.1
Idaho	283	a	212	a	208	a	271	a	643	a

Table 8-24 continued

State	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Illinois	16,619	0.3	17,067	0.2	17,445	0.3	16,173	0.2	15,299	0.2
Indiana	15,384	0.3	14,202	0.2	12,733	0.2	9,899	0.1	11,745	0.2
Iowa	4,729	0.1	4,321	0.1	4,373	0.1	6,914	0.1	7,861	0.1
Kansas	2,295	<i>a</i>	2,351	<i>a</i>	1,948	<i>a</i>	7,995	0.1	20,712	0.3
Kentucky	1,321	<i>a</i>	635	<i>a</i>	738	<i>a</i>	780	<i>a</i>	649	<i>a</i>
Louisiana	343,434	5.6	394,624	5.8	364,829	5.6	303,456	4.5	332,207	4.4
Maine	328	<i>a</i>	403	<i>a</i>	475	<i>a</i>	695	<i>a</i>	452	<i>a</i>
Maryland	477,645	7.8	587,567	8.6	560,074	8.5	620,268	9.1	661,290	8.7
Massachusetts	58,443	1.0	68,195	1.0	57,449	0.9	63,310	0.9	63,989	0.8
Michigan	8,849	0.1	14,587	0.2	17,999	0.3	16,166	0.2	17,642	0.2
Minnesota	10,463	0.2	10,289	0.2	8,621	0.1	14,641	0.2	8,964	0.1
Mississippi	46,269	0.8	53,875	0.8	55,477	0.8	68,341	1.0	84,976	1.1
Missouri	7,802	0.1	12,705	0.2	9,561	0.1	8,640	0.1	13,376	0.2
Montana	35	<i>a</i>	248	<i>a</i>	126	<i>a</i>	215	<i>a</i>	339	<i>a</i>
Nebraska	381	<i>a</i>	244	<i>a</i>	402	<i>a</i>	853	<i>a</i>	535	<i>a</i>
Nevada	535	<i>a</i>	616	<i>a</i>	672	<i>a</i>	505	<i>a</i>	511	<i>a</i>
New Hampshire	4,852	0.1	5,353	0.1	5,314	0.1	9,287	0.1	7,398	0.1
New Jersey	78,975	1.3	108,292	1.6	148,319	2.3	126,995	1.9	112,331	1.5
New Mexico	23,339	0.4	28,317	0.4	33,711	0.5	54,970	0.8	45,559	0.6
New York	58,744	1.0	58,182	0.9	55,875	0.9	68,182	1.0	54,992	0.7
North Carolina	8,275	0.1	7,510	0.1	5,845	0.1	7,561	0.1	6,254	0.1
North Dakota	26	<i>a</i>	15	<i>a</i>	—	—	106	<i>a</i>	90	<i>a</i>
Ohio	104,543	1.7	115,872	1.7	127,116	1.9	131,299	1.9	159,626	2.1

Table 8-24 continued

State	FY 1984		FY 1985		FY 1986		FY 1987		FY 1988	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Oklahoma	1,148	a	2,607	a	4,452	0.1	3,118	a	3,406	a
Oregon	5,831	0.1	4,050	0.1	4,068	0.1	3,491	0.1	2,906	a
Pennsylvania	70,541	1.2	69,430	1.0	81,915	1.2	110,416	1.6	105,174	1.4
Rhode Island	1,166	a	1,481	a	1,869	a	2,585	a	2,544	a
South Carolina	254	a	551	a	721	a	1,049	a	896	a
South Dakota	314	a	829	a	476	a	444	a	485	a
Tennessee	8,931	0.1	7,736	0.1	10,505	0.2	15,946	0.2	21,494	0.3
Texas	587,124	9.6	657,512	9.6	693,020	10.6	764,386	11.3	913,120	12.1
Utah	317,690	5.2	335,823	4.9	316,717	4.8	289,036	4.3	429,151	5.7
Vermont	334	a	82	a	1,752	a	740	a	530	a
Virginia	161,050	2.6	187,973	2.8	188,622	2.9	240,589	3.5	318,312	4.2
Washington	31,808	0.5	42,813	0.6	39,304	0.6	42,944	0.6	17,547	0.2
West Virginia	93	a	351	a	291	a	819	a	260	a
Wisconsin	17,291	0.3	28,494	0.4	20,966	0.3	20,216	0.3	32,363	0.4
Wyoming	433	a	585	a	446	a	512	a	226	a
Total <i>b</i>	6,119,937	100.0	6,835,240	100.0	6,567,966	100.0	6,791,565	100.0	5,577,228	100.0

a Less than 0.05 percent.

b Excludes smaller procurements—generally those of \$10,000 or less through FY 1984 and \$25,000 beginning in FY 1985; also excludes other government agencies, awards outside the United States, and actions on the Jet Propulsion Laboratory contracts.

Table 8-25 continued

Region <i>a</i>	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	Total
	Percentage Change of Prime Contract Award Value Over Previous Year										
New England	2.9	12.7	1.0	2.8	34.4	1.1	2.1	-27.2	32.6	-36.9	—
Mideast	23.5	-9.1	11.8	10.4	13.7	7.8	19.6	2.8	10.2	1.7	—
Southeast	21.3	13.6	23.8	17.6	22.8	13.4	20.5	0.5	-11.2	21.5	—
Great Plains	-22.0	<i>b</i>	-4.4	4.0	3.4	10.6	18.2	-17.5	56.0	31.4	—
Great Lakes	28.4	7.7	-14.6	5.9	-7.0	37.1	16.9	3.2	-1.3	22.2	—
Southwest	10.6	15.4	8.4	17.1	15.4	10.4	11.7	5.4	11.9	22.2	—
Rocky Mountain	10.8	24.9	6.4	14.6	103.3	6.7	6.7	-7.1	-6.5	28.3	—
Far West	5.0	18.7	8.7	8.8	3.5	1.5	4.4	-10.5	11.2	7.0	—
Alaska and Hawaii	15.0	65.0	-2.8	19.8	17.2	-14.2	12.8	2.4	14.8	9.7	—
United States	15.0	13.5	10.8	11.7	15.7	7.4	11.7	-3.9	3.4	11.6	—

a The New England region consists of Connecticut, Maine, Massachusetts, Rhode Island, New Hampshire, and Vermont. The Mideast region is Delaware, the District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The Southeast region consists of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The Great Plains region is Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The Great Lakes region contains Illinois, Indiana, Michigan, Ohio, and Wisconsin. The Southwest is Arizona, New Mexico, Oklahoma, and Texas. The Rocky Mountain region consists of Colorado, Idaho, Montana, Utah, and Wyoming. The Far West region is California, Nevada, Oregon, and Washington.

b Less than 0.05 percent.

Table 8-26. Value and Percentage of Total of Awards by Installation (in millions of dollars)

Installation	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Ames Research Center <i>a</i>	219.8	4.6	236.2	4.3	207.0	3.4	222.1	3.8	247.8	3.6
Goddard Space Flight Center <i>b</i>	634.2	14.4	694.0	13.7	790.4	14.0	864.0	14.7	952.4	14.0
Johnson Space Center	1,197.6	28.4	1,429.1	29.5	1,625.8	30.0	1,690.0	38.7	1,737.8	25.5
Kennedy Space Center	357.3	8.5	395.9	8.2	527.9	9.8	585.4	9.9	724.7	10.7
Langley Research Center	225.0	5.4	235.5	4.9	218.0	4.0	181.7	3.1	216.5	3.2
Lewis Research Center	274.1	6.5	319.8	6.6	338.0	6.3	427.2	7.3	467.3	6.9
Marshall Space Flight Center	774.4	18.4	917.2	19.0	1,050.7	19.4	1,225.5	20.8	1,677.5	24.7
NASA Resident Office/JPL	338.6	8.1	397.2	8.2	410.8	7.6	426.3	7.2	454.9	6.7
National Space Technology Laboratories/Stennis	33.7	0.8	36.7	0.8	38.4	0.8	39.6	0.7	40.4	0.6
NASA Headquarters	157.1	3.7	181.0	3.7	201.3	3.7	221.9	3.8	277.5	4.1
Total	4,211.8	100.0	4,842.6	100.0	5,408.3	100.0	5,883.7	100.0	6,796.8	100.0

Table 8-26 continued

Installation	FY 1979		FY 1980		FY 1981		FY 1982		FY 1983	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Ames Research Center <i>a</i>	281.2	3.8	340.4	4.1	361.3	4.4	467.0	5.4	431.5	4.5
Goddard Space Flight Center <i>b</i>	953.8	13.0	1,076.8	13.0	1,265.4	15.5	1,313.3	15.3	1,356.3	14.2
Johnson Space Center	1,636.2	22.1	1,719.1	20.7	1,359.5	16.6	1,627.4	18.9	1,806.4	18.9
Kennedy Space Center	814.2	11.1	977.9	11.8	1,026.6	12.6	883.4	10.3	1,069.2	11.2
Langley Research Center	214.6	2.9	248.4	3.0	261.4	3.2	289.5	3.4	297.3	3.1
Lewis Research Center	628.0	8.5	675.7	8.2	625.5	7.6	381.8	4.4	417.9	4.4
Marshall Space Flight Center	1,824.6	24.9	1,999.1	24.1	1,891.8	23.1	2,059.8	23.9	2,428.3	25.5
NASA Resident Office/JPL	533.1	7.3	724.6	8.7	895.4	11.0	1,008.7	11.7	986.0	10.3
National Space Technology Laboratories/Stennis	49.3	0.7	60.0	0.7	57.7	0.7	71.4	0.8	91.5	1.0
NASA Headquarters	419.1	5.7	476.0	5.7	435.1	5.3	507.5	5.9	660.7 <i>c</i>	6.9
Total	7,354.1	100.0	8,298.0	100.0	8,179.7	100.0	8,609.8	100.0	9,545.1	100.0

a Includes Dryden procurements.

b Includes Wallops procurements.

c Includes \$14.2 million in reimbursable funds to the U.S. Treasury for the Tracking and Data Relay Satellite System (TDRSS).

Table 8-27. Ranking of NASA's Top Ten Contractors by Fiscal Year

Contractor	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Rockwell International Corp.	1	1	1	1	1	1	1	1	1	1
Martin Marietta Corp.	2	2	2	2	2	2	3	3	2	4
General Electric	3	4	6	10	—	—	—	—	6	7
McDonnell Douglas Corp.	4	3	3	3	4	6	7	5	5	5
Bendix Corp. ^a	5	6	7	8	7	8	8	10	—	—
IBM	6	7	8	9	9	9	—	—	—	—
Computer Sciences Corp.	7	5	4	5	6	—	—	—	—	—
Morton Thiokol Corp.	8	8	5	4	3	3	4	4	4	4
United Technologies Corp.	9	9	10	—	8	10	—	—	9	—
Hughes Aircraft Corp.	10	10	—	—	—	—	—	—	—	—
Boeing Services Int'l.	—	—	9	—	—	—	—	—	—	—
United Space Boosters, Inc. ^b	—	—	—	6	10	7	6	7	7	8
General Dynamics Corp.	—	—	—	7	5	5	5	8	—	—
Lockheed Space Ops. Co.	—	—	—	—	—	4	2	2	3	2
Lockheed Missiles & Space Co.	—	—	—	—	—	—	9	—	—	—
Lockheed Engineering Mgmt. Co. ^c	—	—	—	—	—	—	10	—	10	9
Ford Aerospace and Comm.	—	—	—	—	—	—	—	6	—	—
RCA Corp.	—	—	—	—	—	—	—	9	—	—
Boeing Co.	—	—	—	—	—	—	—	—	8	6
EG&G Florida, Inc.	—	—	—	—	—	—	—	—	—	10

^a Also called Allied Bendix Aerospace.

^b Includes contracted work performed at more than one location.

^c Also called Lockheed Engineering and Science Co.

Table 8-28. Top Fifty Contractors: FY 1979 (in thousands of dollars) a

Contractor/Place of Contract Performance b	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,071,755	31.37
2. <i>Martin Marietta Corp.</i> New Orleans, Louisiana	2	178,391	5.22
3. <i>General Electric Co.</i> King of Prussia, Pennsylvania	8	120,941	3.54
4. <i>McDonnell Douglas Corp.</i> Huntington Beach, California	3	113,676	3.33
5. <i>Bendix Corp.</i> Columbia, Maryland	4	100,205	2.93
6. <i>IBM</i> Houston, Texas	6	93,485	2.74
7. <i>Computer Sciences Corp.</i> Kennedy Space Center, Florida	10	92,854	2.72
8. <i>Thiokol Corp.</i> Brigham City, Utah	9	77,724	2.27
9. <i>United Technologies Corp.</i> East Hartford, Connecticut	13	73,270	2.14
10. <i>Hughes Aircraft Co.</i> Los Angeles, California	7	71,106	2.08
11. <i>Boeing Services International</i> Kennedy Space Center, Florida	14	58,198	1.70
12. <i>RCA Corp.</i> Princeton, New Jersey	12	50,763	1.49
13. <i>Lockheed Electronics Co.</i> Houston, Texas	5	50,571	1.48
14. <i>General Dynamics Corp.</i> San Diego, California	11	46,928	1.37
15. <i>Boeing Co.</i> Seattle, Washington	15	43,311	1.27
16. <i>Lockheed Missile & Space Co.</i> Sunnyvale, California	22	36,020	1.05
17. <i>Ford Aerospace and Communications</i> Houston, Texas	17	35,189	1.03
18. <i>Planning Research Corp.</i> Kennedy Space Center, Florida	18	34,748	1.02
19. United Space Boosters, Inc. Kennedy Space Center, Florida	25	32,634	0.96
20. <i>Perkin Elmer Corp.</i> Danbury, Connecticut	27	30,564	0.89
21. <i>TRW Inc.</i> Redondo Beach, California	24	29,000	0.85

Table 8-28 continued

Contractor/Place of Contract Performance <i>b</i>	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
22. <i>Pan American World Airways</i> Bay St. Louis, Mississippi	33	27,257	0.80
23. <i>Singer Co.</i> Houston, Texas	23	27,248	0.80
24. <i>Ball Corp.</i> Boulder, Colorado	26	22,102	0.65
25. <i>Northrop Services, Inc.</i> Houston, Texas	28	19,509	0.59
26. <i>Sperry Corp.</i> Phoenix, Arizona	19	19,509	0.57
27. <i>Lockheed Corp.</i> Burbank, California	37	19,483	0.57
28. <i>Air Products & Chemicals, Inc.</i> Allentown, Pennsylvania	21	19,430	0.57
29. <i>Vought Corp.</i> Dallas, Texas	16	18,415	0.54
30. Computer Sciences Technicolor Associates Greenbelt, Maryland	31	16,143	0.47
31. Westinghouse Electric Corp. Baltimore Washington Int'l. Airport, Maryland	32	16,070	0.47
32. <i>Honeywell Information Systems</i> McLean, Virginia	39	15,794	0.46
33. <i>Fairchild Industries, Inc.</i> Germantown, Maryland	34	15,387	0.45
34. Briscoe Frank Co. Kennedy Space Center, Florida	20	14,129	0.41
35. <i>Kentron International, Inc.</i> Hampton, Virginia	65	13,733	0.40
36. Mechanical Technology, Inc. Latham, New York	54	13,700	0.40
37. <i>Bostrom Bergen Metal Products c</i> Mountain View, California	—	13,466	0.39
38. <i>Teledyne Industries, Inc.</i> Huntsville, Alabama	38	12,938	0.38
39. <i>General Motors Corp.</i> Indianapolis, Indiana	47	10,997	0.32
40. <i>Raytheon Services Co.</i> Halethorpe, Maryland	35	9,382	0.27
41. <i>Control Data Corp.</i> Minneapolis, Minnesota	43	9,108	0.27

Table 8-28 continued

Contractor/Place of Contract Performance <i>b</i>	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
42. <i>Modular Computer Systems, Inc.</i> Fort Lauderdale, Florida	74	8,879	0.26
43. <i>SDC Integrated Services, Inc.</i> Slidell, Louisiana	42	8,364	0.24
44. <i>Virginia Electric & Power Co.</i> Hampton, Virginia	44	7,464	0.22
45. <i>Metro Contract Services, Inc. c</i> Huntsville, Alabama	45	7,281	0.21
46. <i>Digital Equipment Corp.</i> Maynard, Massachusetts	64	6,923	0.20
47. <i>Wackenhut Services, Inc.</i> Kennedy Space Center, Florida	57	6,521	0.19
48. <i>Klate Holt Co. c</i> Hampton, Virginia	86	6,496	0.19
49. <i>Honeywell, Inc.</i> Minneapolis, Minnesota	40	6,403	0.19
50. <i>Textron, Inc.</i> Fort Worth, Texas	50	6,343	0.19
Other		576,491	16.88
Total Awards to Business Firms		3,416,927	100.00

a Excludes smaller procurements, generally those of less than \$10,000.

b For contractors in italics, awards during the year represent awards on several contracts.

c Small business concern.

Table 8–29. Top Fifty Contractors: FY 1980 (in thousands of dollars) a

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,273,345	32.92
2. Martin Marietta Corp. New Orleans, Louisiana	2	232,948	6.02
3. McDonnell Douglas Corp. Huntington Beach, California	4	159,747	4.13
4. General Electric Co. King of Prussia, Pennsylvania	3	114,286	2.95
5. Computer Sciences Corp. Kennedy Space Center, Florida	7	112,146	2.90
6. Bendix Corp. Columbia, Maryland	5	97,290	2.52
7. IBM Houston, Texas	6	84,336	2.18
8. Thiokol Corp. Brigham City, Utah	8	79,232	2.05
9. United Technologies Corp. East Hartford, Connecticut	9	74,639	1.93
10. Hughes Aircraft Co. El Segundo, California	10	68,449	1.77
11. Boeing Services International Kennedy Space Center, Florida	11	59,252	1.53
12. Lockheed Engineering and Mgmt. Corp. Houston, Texas	—	59,051	1.53
13. Ford Aerospace and Communications Houston, Texas	17	47,636	1.23
14. Lockheed Missile & Space Co. Sunnyvale, California	16	47,047	1.22
15. General Dynamics Corp. San Diego, California	14	46,181	1.19
16. Boeing Co. Seattle, Washington	15	44,613	1.15
17. Perkin Elmer Corp. Danbury, Connecticut	20	43,147	1.12
18. United Space Boosters, Inc. Kennedy Space Center, Florida	19	43,117	1.11
19. TRW, Inc. Redondo Beach, California	21	41,852	1.08
20. Planning Research Corp. Kennedy Space Center, Florida	18	37,952	0.98
21. RCA Corp. Princeton, New Jersey	12	31,656	0.82

Table 8-29 continued

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
22. Pan American World Airways Bay St. Louis, Mississippi	22	31,585	0.82
23. Singer Co. Houston, Texas	23	18,035	0.72
24. Lockheed Corp. Burbank, California	27	25,401	0.66
25. Kentron International, Inc. Hampton, Virginia	35	23,339	0.60
26. Northrop Services, Inc. Houston, Texas	25	22,066	0.57
27. Ball Corp. Boulder, Colorado	24	20,870	0.54
28. Teledyne Industries, Inc. Huntsville, Alabama	38	19,631	0.51
29. General Motors Corp. Indianapolis, Indiana	39	19,514	0.50
30. Computer Sciences Technicolor Associates Greenbelt, Maryland	30	18,241	0.47
31. Sperry Corp. Phoenix, Arizona	26	17,651	0.46
32. Air Products & Chemicals, Inc. Allentown, Pennsylvania	28	17,410	0.45
33. Garrett Corp. Phoenix, Arizona	80	16,492	0.43
34. Mechanical Technology, Inc. Latham, New York	36	14,504	0.37
35. Honeywell Information Systems McLean, Virginia	32	14,280	0.37
36. Vought Corp. Dallas, Texas	29	13,667	0.35
37. Christie Willamette JV Mountain View, California	—	12,987	0.34
38. Raytheon Services Co. Halethorpe, Maryland	40	12,721	0.33
39. Fairchild Industries, Inc. Germantown, Maryland	33	10,426	0.27
40. Virginia Electric & Power Co. Hampton, Virginia	44	9,449	0.24
41. Westinghouse Electric Corp. Baltimore Washington Int'l. Airport, Maryland	31	9,044	0.23

Table 8-29 continued

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
42. Pioneer Contract Services, Inc. <i>b</i> Huntsville, Alabama	—	9,030	0.23
43. Wackenhut Services, Inc. Kennedy Space Center, Florida	47	8,948	0.23
44. SDC Integrated Services, Inc. Slidell, Louisiana	43	8,827	0.23
45. Management & Technical Services Houston, Texas	60	8,648	0.22
46. Control Data Corp. Minneapolis, Minnesota	41	8,256	0.21
47. Klate Holt Co. <i>b</i> Hampton, Virginia	48	7,699	0.20
48. Northrop Worldwide Aircraft Houston, Texas	51	7,348	0.19
49. Briscoe Frank Co. Kennedy Space Center, Florida	34	7,192	0.19
50. Global Associates New Orleans, Louisiana	59	7,154	0.18
Other		639,960	16.56
Total Awards to Business Firms		3,868,297	100.00

a Excludes smaller procurements, generally those of less than \$10,000.

b Small business concern.

Table 8-30. Top Fifty Contractors: FY 1981 (in thousands of dollars) a

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,471,331	34.43
2. Martin Marietta Corp. New Orleans, Louisiana	2	261,308	6.11
3. McDonnell Douglas Corp. Huntington Beach, California	3	198,323	4.64
4. Computer Sciences Corp. Kennedy Space Center, Florida	5	129,442	3.03
5. Thiokol Corp. Brigham City, Utah	8	105,273	2.46
6. General Electric Co. King of Prussia, Pennsylvania	4	103,731	2.43
7. Bendix Corp. Columbia, Maryland	6	103,133	2.41
8. IBM Houston, Texas	7	95,013	2.22
9. Boeing Services International Kennedy Space Center, Florida	11	81,202	1.90
10. United Technologies Corp. Windsor Locks, Connecticut	9	71,370	1.67
11. General Dynamics Corp. San Diego, California	15	66,070	1.55
12. United Space Boosters, Inc. Kennedy Space Center, Florida	18	65,340	1.53
13. Ford Aerospace and Communications Houston, Texas	13	61,752	1.45
14. Lockheed Engineering and Mgmt. Corp. Houston, Texas	12	60,548	1.42
15. Hughes Aircraft Co. Los Angeles, California	10	53,148	1.24
16. Perkin Elmer Corp. Danbury, Connecticut	17	51,427	1.20
17. Planning Research Corp. Kennedy Space Center, Florida	20	44,394	1.04
18. Lockheed Missile & Space Co. Sunnyvale, California	14	43,022	1.01
19. Boeing Co. Seattle, Washington	16	40,132	0.94
20. TRW, Inc. Redondo Beach, California	19	36,629	0.86
21. Pan American World Airways Bay St. Louis, Mississippi	22	34,023	0.80

Table 8-30 continued

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
22. Ball Corp. Boulder, Colorado	27	30,342	0.71
23. Singer Co. Houston, Texas	23	29,918	0.70
24. RCA Corp. Princeton, New Jersey	21	27,334	0.64
25. Air Products & Chemicals, Inc. Allentown, Pennsylvania	32	25,151	0.59
26. Sperry Corp. Phoenix, Arizona	31	23,895	0.56
27. Northrop Services, Inc. Houston, Texas	26	23,737	0.56
28. Teledyne Industries, Inc. Huntsville, Alabama	28	23,181	0.54
29. Computer Sciences Technicolor Associates Greenbelt, Maryland	30	19,559	0.49
30. Kentron International, Inc. Hampton, Virginia	25	16,292	0.38
31. Lockheed Corp. Burbank, California	24	16,051	0.38
32. Raytheon Services Co. Halethorpe, Maryland	38	14,918	0.35
33. Vought Corp. Dallas, Texas	36	14,455	0.34
34. Mechanical Technology, Inc. Latham, New York	34	13,755	0.32
35. General Motors Corp. Indianapolis, Indiana	29	13,710	0.32
36. Wackenhut Services, Inc. Kennedy Space Center, Florida	43	13,254	0.31
37. Honeywell Information Systems McLean, Virginia	35	12,972	0.30
38. Management & Technical Services Houston, Texas	45	11,758	0.28
39. Control Data Corp. Hampton, Virginia	46	11,391	0.27
40. SDC Integrated Services, Inc. Slidell, Louisiana	44	11,201	0.26
41. Virginia Electric & Power Co. Hampton, Virginia	40	10,193	0.24
42. Honeywell, Inc. St. Petersburg, Florida	59	9,853	0.23

Table 8-30 continued

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
43. Garrett Corp. Phoenix, Arizona	33	9,204	0.22
44. Eaton Corp. Farmingdale, New York	—	8,880	0.21
45. Digital Equipment Corp. Landover, Maryland	52	8,728	0.20
46. Klate Holt Co. <i>b</i> Hampton, Virginia	47	8,375	0.20
47. W&J Construction Corp. <i>b</i> Kennedy Space Center, Florida	—	7,846	0.18
48. SF&G Inc. DBA Mercury <i>b</i> Huntsville, Alabama	—	7,795	0.18
49. Northrop Worldwide Aircraft Houston, Texas	48	7,766	0.18
50. Informatics, Inc. Mountain View, California	60	7,297	0.17
Other		657,384	15.35
Total Awards to Business Firms		4,272,806	100.00

a Excludes smaller procurements, generally those of less than \$10,000.

b Small business concern.

Table 8-31. Top Fifty Contractors: FY 1982 (in thousands of dollars) a

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,564,210	32.55
2. Martin Marietta Corp. New Orleans, Louisiana	2	309,896	6.45
3. McDonnell Douglas Corp. Huntington Beach, California	3	220,312	4.58
4. Thiokol Corp. Brigham City, Utah	5	152,413	3.17
5. Computer Sciences Corp. Kennedy Space Center, Florida	4	138,334	2.88
6. United Space Boosters, Inc. Kennedy Space Center, Florida	12	127,055	2.64
7. General Dynamics Corp. San Diego, California	11	113,882	2.37
8. Bendix Corp. Columbia, Maryland	7	108,720	2.26
9. IBM Houston, Texas	8	106,512	2.22
10. General Electric Co. King of Prussia, Pennsylvania	6	97,003	2.02
11. United Technologies Corp. Windsor Locks, Connecticut	10	89,855	1.87
12. Lockheed Engineering and Mgmt. Corp. Houston, Texas	14	88,872	1.85
13. Boeing Services International Kennedy Space Center, Florida	9	81,574	1.70
14. Ford Aerospace and Communications Houston, Texas	13	74,057	1.54
15. Lockheed Missile & Space Co. Sunnyvale, California	18	68,592	1.43
16. Planning Research Corp. Kennedy Space Center, Florida	17	54,665	1.14
17. Perkin Elmer Corp. Danbury, Connecticut	16	44,394	0.92
18. TRW, Inc. Redondo Beach, California	20	43,859	0.91
19. Boeing Co. Seattle, Washington	19	40,986	0.85
20. Hughes Aircraft Co. Los Angeles, California	15	39,535	0.82
21. Pan American World Airways Bay St. Louis, Mississippi	21	34,792	0.72

Table 8-31 continued

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
22. Singer Co. Houston, Texas	23	33,097	0.69
23. Space Communications Co. Gaithersburg, Maryland	81	30,191	0.63
24. Teledyne Industries, Inc. Northridge, California	28	29,175	0.61
25. Ball Corp. Boulder, Colorado	22	26,420	0.55
26. Sperry Corp. Phoenix, Arizona	26	25,989	0.54
27. Northrop Services, Inc. Houston, Texas	27	25,261	0.53
28. Air Products & Chemicals, Inc. Allentown, Pennsylvania	25	25,036	0.52
29. RCA Corp. Princeton, New Jersey	24	23,682	0.49
30. Raytheon Services Co. Greenbelt, Maryland	32	19,586	0.41
31. Honeywell Information Systems McLean, Virginia	37	18,453	0.38
32. Santa Barbara Research Center Goleta, California	—	16,362	0.34
33. Management & Technical Services Houston, Texas	38	15,565	0.32
34. Kentron International, Inc. Hampton, Virginia	30	14,774	0.31
35. SF&G Inc. DBA Mercury <i>b</i> Huntsville, Alabama	48	14,256	0.30
36. Wackenhut Services, Inc. Kennedy Space Center, Florida	36	13,948	0.29
37. Systems Development Corp. Slidell, Louisiana	—	13,406	0.28
38. Control Data Corp. Minneapolis, Minnesota	45	12,789	0.27
39. Westinghouse Electric Corp. Large, Pennsylvania	51	12,149	0.25
40. International Telephone and Telegraph (ITT) Fort Wayne, Indiana	100	11,701	0.24
41. Mechanical Technology, Inc. Latham, New York	34	10,275	0.21
42. General Motors Corp. Indianapolis, Indiana	35	10,275	0.21

Table 8-31 continued

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
43. Modular Computer Systems, Inc. Fort Lauderdale, Florida	71	10,109	0.21
44. Digital Equipment Corp. Mountain View, California	45	10,036	0.21
45. Virginia Electric & Power Co. Hampton, Virginia	41	9,622	0.20
46. Vought Corp. Dallas, Texas	33	9,510	0.20
47. Honeywell, Inc. Largo, Florida	42	9,221	0.19
48. Northrop Worldwide Aircraft Houston, Texas	49	9,002	0.19
49. Garrett Corp. Phoenix, Arizona	43	8,967	0.19
50. Global Associates <i>b</i> New Orleans, Louisiana	52	8,961	0.19
Other		728,252	15.16
Total Awards to Business Firms		4,805,588	100.00

a Excludes smaller procurements, generally those of less than \$10,000.

b Small business concern.

Table 8-32. Top Fifty Contractors: FY 1983 (in thousands of dollars) a

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,568,303	28.07
2. Martin Marietta Corp. New Orleans, Louisiana	2	466,074	8.34
3. Morton Thiokol Corp. Brigham City, Utah	4	268,457	4.81
4. McDonnell Douglas Corp. Huntington Beach, California	3	236,717	4.24
5. General Dynamics Corp. San Diego, California	7	156,336	2.80
6. Computer Sciences Corp. Kennedy Space Center, Florida	5	147,135	2.63
7. Bendix Corp. Columbia, Maryland	8	137,038	2.45
8. United Technologies Corp. Windsor Locks, Connecticut	11	116,152	2.08
9. IBM Houston, Texas	9	116,055	2.08
10. United Space Boosters, Inc. Kennedy Space Center, Florida	6	115,450	2.07
11. Ford Aerospace and Communications Houston, Texas	14	106,804	1.91
12. Lockheed Engineering and Mgmt. Corp. Houston, Texas	12	100,733	1.80
13. Lockheed Missile & Space Co. Sunnyvale, California	15	96,419	1.73
14. Boeing Services International Kennedy Space Center, Florida	13	85,943	1.54
15. General Electric Co. King of Prussia, Pennsylvania	10	85,492	1.53
16. Perkin Elmer Corp. Danbury, Connecticut	17	70,093	1.25
17. EG&G Florida Inc. Kennedy Space Center, Florida	—	67,571	1.21
18. Planning Research Corp. Kennedy Space Center, Florida	16	57,148	1.02
19. RCA Corp. Princeton, New Jersey	29	56,786	1.02
20. Hughes Aircraft Co. Los Angeles, California	20	51,434	0.92
21. TRW, Inc. Redondo Beach, California	18	49,427	0.88

Table 8-32 continued

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
22. Teledyne Industries, Inc. Huntsville, Alabama	24	47,330	0.85
23. Boeing Co. Seattle, Washington	19	43,606	0.78
24. Ball Corp. Boulder, Colorado	25	38,898	0.70
25. Pan American World Airways Bay St. Louis, Mississippi	21	35,877	0.64
26. Singer Co. Houston, Texas	22	35,316	0.63
27. Northrop Services, Inc. Houston, Texas	27	28,281	0.52
28. Sperry Corp. Houston, Texas	26	26,509	0.47
29. Air Products & Chemicals, Inc. Allentown, Pennsylvania	28	25,117	0.45
30. Honeywell Information Systems McLean, Virginia	31	23,069	0.41
31. Raytheon Services Co. Greenbelt, Maryland	30	21,414	0.38
32. Lockheed Space Operations Co. Kennedy Space Center, Florida	—	19,381	0.35
33. Honeywell, Inc. Clearwater, Florida	47	19,030	0.34
34. Management & Technical Services Houston, Texas	33	17,761	0.32
35. Kentron International, Inc. Hampton, Virginia	34	17,701	0.32
36. Digital Equipment Corp. Landover, Maryland	44	17,116	0.31
37. Mercury Consolidated Inc. Huntsville, Alabama	—	16,621	0.30
38. Systems Development Corp. Slidell, Louisiana	37	14,198	0.25
39. Control Data Corp. Greenbelt, Maryland	38	13,309	0.24
40. Vought Corp. Dallas, Texas	46	11,915	0.21
41. Mechanical Technology, Inc. Latham, New York	41	11,838	0.21
42. Informatics General Corp. Mountain View, California	52	10,689	0.19

Table 8-32 continued

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
43. Westinghouse Electric Corp. Large, Pennsylvania	39	10,455	0.19
44. Fairchild Industries, Inc. Germantown, Maryland	53	10,450	0.19
45. Virginia Electric & Power Co. Hampton, Virginia	45	10,087	0.18
46. Garrett Corp. Phoenix, Arizona	49	9,689	0.17
47. Northrop Worldwide Aircraft Houston, Texas	48	9,324	0.17
48. Klate Holt Co. <i>b</i> Hampton, Virginia	51	9,281	0.17
49. Lockheed Corp. Burbank, California	55	9,171	0.16
50. Cleveland Electric Illuminating Cleveland, Ohio	57	8,710	0.16
Other		875,695	15.36
Total Awards to Business Firms		5,585,985	100.00

a Excludes smaller procurements, generally those of less than \$10,000.

b Small business concern.

Table 8-33. Top Fifty Contractors: FY 1984 (in thousands of dollars) a

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,401,411	23.50
2. Martin Marietta Corp. New Orleans, Louisiana	2	427,788	7.17
3. Morton Thiokol Corp. Brigham City, Utah	3	322,362	5.40
4. Lockheed Space Operations Co. Kennedy Space Center, Florida	32	301,357	5.05
5. General Dynamics Corp. San Diego, California	5	252,515	4.23
6. McDonnell Douglas Corp. Huntington Beach, California	4	199,763	3.35
7. United Space Boosters, Inc. Huntsville, Alabama	10	196,520	3.29
8. Bendix Corp. Columbia, Maryland	7	162,643	2.73
9. IBM Houston, Texas	9	134,408	2.25
10. United Technologies Corp. Windsor Locks, Connecticut	8	117,924	1.98
11. EG&G Florida Inc. Kennedy Space Center, Florida	17	109,357	1.83
12. Ford Aerospace and Communications Houston, Texas	11	105,663	1.77
13. Lockheed Engineering and Mgmt. Corp. Houston, Texas	12	105,116	1.76
14. Lockheed Missile & Space Co. Sunnyvale, California	13	102,096	1.71
15. Computer Sciences Corp. Houston, Texas	6	89,465	1.50
16. TRW, Inc. Redondo Beach, California	21	82,291	1.38
17. Perkin Elmer Corp. Danbury, Connecticut	16	79,349	1.33
18. RCA Corp. Princeton, New Jersey	19	67,979	1.14
19. Planning Research Corp. Kennedy Space Center, Florida	18	57,366	0.96
20. Teledyne Industries, Inc. Huntsville, Alabama	22	51,528	0.89
21. Boeing Co. Seattle, Washington	23	44,188	0.74

Table 8-33 continued

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
22. Singer Co. Houston, Texas	26	43,936	0.74
23. General Electric Co. King of Prussia, Pennsylvania	15	43,553	0.73
24. Hughes Aircraft Co. El Segundo, California	20	42,163	0.71
25. Pan American World Services, Inc. Bay St. Louis, Mississippi	25	40,296	0.68
26. Ball Corp. Boulder, Colorado	24	39,088	0.65
27. Northrop Services, Inc. Houston, Texas	27	32,193	0.54
28. Raytheon Services Co. Greenbelt, Maryland	31	27,764	0.47
29. Westinghouse Electric Corp. Large, Pennsylvania	43	25,889	0.43
30. Sperry Corp. Houston, Texas	28	24,874	0.42
31. Boeing Services International Kennedy Space Center, Florida	14	24,797	0.42
32. Air Products & Chemicals, Inc. Allentown, Pennsylvania	29	21,773	0.36
33. Kentron International, Inc. Hampton, Virginia	35	20,937	0.35
34. Control Data Corp. Greenbelt, Maryland	39	20,221	0.34
35. Management & Technical Services Houston, Texas	34	19,776	0.33
36. Lockheed Corp. Marietta, Georgia	49	18,210	0.30
37. Digital Equipment Corp. Mountain View, California	36	16,091	0.27
38. Honeywell, Inc. Clearwater, Florida	33	14,643	0.25
39. Systems Development Corp. Slidell, Louisiana	38	14,637	0.25
40. Fairchild Industries, Inc. Germantown, Maryland	44	13,553	0.23
41. Bechtel National, Inc. Kennedy Space Center, Florida	—	13,228	0.22
42. Mechanical Technology, Inc. Latham, New York	41	12,972	0.22

Table 8-33 continued

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
43. Grumman Aerospace Corp. Bethpage, New York	57	12,559	0.21
44. Informatics General Corp. Mountain View, California	42	12,316	0.21
45. Honeywell Information Systems McLean, Virginia	30	12,013	0.20
46. Northrop Worldwide Aircraft Houston, Texas	47	11,906	0.20
47. Sauer Mechanical, Inc. Kennedy Space Center, Florida	79	11,768	0.20
48. Space Communications Co. Gaithersburg, Maryland	—	11,614	0.19
49. RMS Technologies, Inc. <i>b, c</i> Greenbelt, Maryland	—	11,427	0.19
50. Klate Holt Co. <i>b</i> Hampton, Virginia	48	10,842	0.18
Other		930,299	14.55
Total Awards to Business Firms		5,967,427	100.00
<i>a</i>	Excludes smaller procurements, generally those of less than \$10,000.		
<i>b</i>	Small business concern.		
<i>c</i>	Disadvantaged/minority business firm.		

Table 8-34. Top Fifty Contractors: FY 1985 (in thousands of dollars)

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,345,265	20.22
2. Lockheed Space Operations Co. Kennedy Space Center, Florida	4	551,235	8.29
3. Martin Marietta Corp. New Orleans, Louisiana	2	482,520	7.25
4. Morton Thiokol Corp. Brigham City, Utah	3	334,151	5.02
5. General Dynamics Corp. San Diego, California	5	300,284	4.51
6. United Space Boosters, Inc. Huntsville, Alabama	7	207,336	3.12
7. McDonnell Douglas Corp. Huntington Beach, California	6	193,728	2.91
8. Allied Bendix Aerospace <i>a</i> Columbia, Maryland	8	150,229	2.26
9. Lockheed Missile & Space Co. Sunnyvale, California	14	136,679	2.05
10. Lockheed Engineering and Mgmt. Corp. Houston, Texas	13	124,869	1.88
11. IBM Houston, Texas	9	124,224	1.87
12. Ford Aerospace and Communications Houston, Texas	12	120,287	1.81
13. United Technologies Corp. Windsor Locks, Connecticut	10	110,067	1.65
14. EG&G Florida Inc. Kennedy Space Center, Florida	11	108,064	1.62
15. TRW, Inc. Redondo Beach, California	16	103,181	1.55
16. Computer Sciences Corp. Houston, Texas	15	102,273	1.54
17. RCA Corp. Princeton, New Jersey	18	102,088	1.53
18. Space Communications Co. Gaithersburg, Maryland	48	98,389	1.48
19. Boeing Co. Seattle, Washington	21	69,176	1.04
20. Planning Research Corp. Kennedy Space Center, Florida	19	65,285	0.98
21. Perkin Elmer Corp. Danbury, Connecticut	17	63,659	0.96

Table 8-34 continued

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
22. Pan American World Services, Inc. Bay St. Louis, Mississippi	25	49,269	0.74
23. Teledyne Industries, Inc. Huntsville, Alabama	20	45,837	0.69
24. General Electric Co. King of Prussia, Pennsylvania	23	43,471	0.65
25. Singer Co. Houston, Texas	22	42,552	0.64
26. Boeing Technical Operations Inc. Kennedy Space Center, Florida	—	39,304	0.59
27. Northrop Services, Inc. Houston, Texas	27	39,127	0.59
28. Hughes Aircraft Co. El Segundo, California	24	38,134	0.57
29. Lockheed Corp. Marietta, Georgia	36	30,451	0.46
30. Ball Corp. Boulder, Colorado	26	30,123	0.45
31. Management & Technical Services Houston, Texas	35	26,444	0.40
32. Sperry Corp. Houston, Texas	30	25,239	0.38
33. Raytheon Services Co. Greenbelt, Maryland	28	24,999	0.38
34. Air Products & Chemicals, Inc. Allentown, Pennsylvania	32	24,353	0.37
35. Fairchild Industries, Inc. Germantown, Maryland	40	20,176	0.30
36. Control Data Corp. Mountain View, California	34	19,471	0.29
37. Systems Development Corp. Slidell, Louisiana	39	18,753	0.28
38. Cray Research Inc. Chippewa Falls, Wisconsin	62	18,656	0.28
39. LTV Aerospace & Defense Co. Dallas, Texas	68	17,393	0.26
40. American Telephone & Telegraph (AT&T) Greenbelt, Maryland	65	16,570	0.25
41. Informatics General Corp. Mountain View, California	44	15,607	0.23
42. Digital Equipment Corp. Huntsville, Alabama	37	15,266	0.23

Table 8-34 continued

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
43. Honeywell Information Systems McLean, Virginia	45	14,330	0.22
44. International Fuel Cells Corp. South Windsor, Connecticut	—	14,286	0.21
45. Bamsi, Inc. <i>b, c</i> Huntsville, Alabama	73	13,410	0.20
46. Management Services, Inc. <i>b</i> Huntsville, Alabama	71	13,353	0.20
47. Honeywell, Inc. Clearwater, Florida	38	13,089	0.20
48. Westinghouse Electric Corp. Large, Pennsylvania	29	12,819	0.19
49. Northrop Worldwide Aircraft Houston, Texas	46	12,651	0.19
50. Mechanical Technology, Inc. Latham, New York	42	12,619	0.19
Other		1,052,177	14.83
Total Awards to Business Firms		6,652,918	100.00

a In FY 1984, this was the Bendix Corporation.

b Small business concern.

c Disadvantaged/minority business firm.

Table 8-35. Top Fifty Contractors: FY 1986 (in thousands of dollars)

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,155,806	18.18
2. Lockheed Space Operations Co. Kennedy Space Center, Florida	2	559,159	8.80
3. Martin Marietta Corp. New Orleans, Louisiana	3	427,393	6.72
4. Morton Thiokol Corp. Brigham City, Utah	4	319,888	5.03
5. McDonnell Douglas Corp. Huntington Beach, California	7	265,828	4.18
6. Ford Aerospace and Communications Huntsville, Alabama	12	207,726	3.27
7. USBI Booster Production Co. Huntsville, Alabama	—	196,441	3.09
8. General Dynamics Corp. San Diego, California	5	194,386	3.06
9. RCA Corp. Princeton, New Jersey	17	140,909	2.22
10. Allied Bendix Aerospace Columbia, Maryland	8	137,955	2.17
11. Lockheed Engineering and Mgmt. Corp. Houston, Texas	10	123,899	1.95
12. Lockheed Missile & Space Co. Sunnyvale, California	9	121,095	1.91
13. EG&G Florida Inc. Kennedy Space Center, Florida	14	117,411	1.85
14. Boeing Co. Seattle, Washington	19	112,603	1.77
15. United Technologies Corp. Windsor Locks, Connecticut	13	96,876	1.52
16. Computer Sciences Corp. Houston, Texas	16	96,202	1.51
17. IBM Houston, Texas	11	93,543	1.47
18. TRW, Inc. Redondo Beach, California	15	84,920	1.34
19. Contel Corp. Gaithersburg, Maryland	—	68,531	1.08
20. General Electric Co. King of Prussia, Pennsylvania	24	66,076	1.04
21. Planning Research Corp. Kennedy Space Center, Florida	20	51,336	0.81

Table 8-35 continued

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
22. Teledyne Industries, Inc. Huntsville, Alabama	23	48,075	0.76
23. Pan American World Services, Inc. Bay St. Louis, Mississippi	22	46,508	0.73
24. Northrop Services, Inc. Houston, Texas	27	41,081	0.65
25. Boeing Technical Operations Inc. Kennedy Space Center, Florida	26	35,580	0.56
26. Raytheon Services Co. Greenbelt, Maryland	33	28,449	0.45
27. Lockheed Corp. Marietta, Georgia	29	27,393	0.43
28. Management & Technical Services Houston, Texas	31	27,065	0.43
29. Ball Corp. Boulder, Colorado	30	26,916	0.42
30. Fairchild Industries, Inc. Germantown, Maryland	35	26,013	0.41
31. Perkin Elmer Corp. Danbury, Connecticut	21	23,520	0.37
32. Singer Co. Houston, Texas	25	20,252	0.32
33. Aerojet General Corp. Azusa, California	62	19,589	0.31
34. Bamsi, Inc. <i>a, b</i> Huntsville, Alabama	45	19,029	0.30
35. Informatics General Corp. Mountain View, California	41	19,010	0.30
36. Sperry Corp. Houston, Texas	32	18,382	0.29
37. Westinghouse Electric Corp. Large, Pennsylvania	48	18,095	0.28
38. Air Products & Chemicals, Inc. Allentown, Pennsylvania	34	17,253	0.27
39. Systems Development Corp. Slidell, Louisiana	37	17,066	0.27
40. Harris Corp. Melbourne, Florida	—	16,988	0.27
41. Management Services, Inc. <i>a</i> Huntsville, Alabama	46	15,036	0.24
42. Sverdrup Technology, Inc. Middleburgh Heights, Ohio	74	14,842	0.23

Table 8-35 continued

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
43. Analex Corp. <i>a</i> Cleveland, Ohio	53	14,617	0.23
44. Honeywell, Inc. Clearwater, Florida	47	14,586	0.23
45. Control Data Corp. Mountain View, California	36	13,934	0.22
46. Honeywell Information Systems McLean, Virginia	43	13,776	0.22
47. Mechanical Technology, Inc. Latham, New York	50	13,634	0.21
48. LTV Aerospace & Defense Co. Dallas, Texas	39	13,391	0.21
49. RMS Technologies, Inc. <i>a, b</i> Greenbelt, Maryland	59	13,373	0.21
50. Digital Equipment Corp. Landover, Maryland	42	13,111	0.21
Other		1,081,496	17.00
Total Awards to Business Firms		6,356,043	100.00
<i>a</i> Small business concern.			
<i>b</i> Disadvantaged/minority business firm.			

Table 8-36. Top Fifty Contractors: FY 1987 (in thousands of dollars)

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,610,806	24.62
2. Martin Marietta Corp. New Orleans, Louisiana	3	325,879	4.98
3. Lockheed Space Operations Co. Kennedy Space Center, Florida	2	323,290	4.94
4. Morton Thiokol Corp. Brigham City, Utah	4	286,017	4.37
5. McDonnell Douglas Corp. Huntington Beach, California	5	285,017	4.36
6. General Electric Co. <i>a</i> Princeton, New Jersey	20	225,369	3.45
7. USBI Booster Production Co. Huntsville, Alabama	7	183,052	2.80
8. Boeing Co. Seattle, Washington	14	174,872	2.67
9. United Technologies Corp. Stratford, Connecticut	15	165,616	2.53
10. Lockheed Engineering and Mgmt. Corp. Houston, Texas	11	162,507	2.48
11. Allied Bendix Aerospace Columbia, Maryland	10	142,010	2.17
12. EG&G Florida Inc. Kennedy Space Center, Florida	13	130,743	2.00
13. TRW, Inc. Redondo Beach, California	18	124,473	1.90
14. Ford Aerospace and Communications Palo Alto, California	6	119,978	1.83
15. Lockheed Missile & Space Co. Sunnyvale, California	12	107,967	1.65
16. Computer Sciences Corp. Greenbelt, Maryland	16	90,013	1.38
17. Contel Corp. Gaithersburg, Maryland	19	80,900	1.24
18. IBM Houston, Texas	17	72,017	1.10
19. Pan American World Services, Inc. Bay St. Louis, Mississippi	23	59,849	0.92
20. Orbital Sciences Corp. <i>b</i> Denver, Colorado	—	41,598	0.64
21. Teledyne Industries, Inc. Huntsville, Alabama	22	38,378	0.59

Table 8-36 continued

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
22. Planning Research Corp. Hampton, Virginia	21	36,947	0.56
23. Perkin Elmer Corp. Danbury, Connecticut	31	34,915	0.53
24. Raytheon Services Co. Greenbelt, Maryland	26	32,254	0.49
25. Bamsi, Inc. <i>b, c</i> Huntsville, Alabama	34	31,195	0.48
26. Northrop Services, Inc. Mountain View, California	24	29,950	0.46
27. Boeing Technical Operations Inc. Houston, Texas	25	27,218	0.42
28. Unisys Corp. Greenbelt, Maryland	—	27,148	0.42
29. Sverdrup Technology, Inc. Middleburgh Heights, Ohio	42	26,958	0.41
30. Aerojet General Corp. Azusa, California	33	26,214	0.40
31. General Dynamics Corp. San Diego, California	8	25,433	0.39
32. Wyle Laboratories Huntsville, Alabama	53	24,487	0.37
33. Sterling Federal Systems, Inc. Mountain View, California	—	24,103	0.37
34. Fairchild Industries, Inc. Germantown, Maryland	30	23,889	0.37
35. Grumman Aerospace Corp. Bethpage, New York	67	23,243	0.36
36. Lockheed Corp. Marietta, Georgia	27	21,555	0.33
37. Control Data Corp. Greenbelt, Maryland	45	20,076	0.31
38. Air Products & Chemicals, Inc. Allentown, Pennsylvania	38	19,309	0.30
39. Digital Equipment Corp. Landover, Maryland	50	18,871	0.29
40. RMS Technologies, Inc. <i>b, c</i> Greenbelt, Maryland	49	18,613	0.28
41. Singer Co. Houston, Texas	32	17,868	0.27
42. Ball Corp. Boulder, Colorado	29	17,416	0.27

Table 8-36 continued

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
43. Management Services, Inc. <i>b</i> Huntsville, Alabama	41	17,387	0.27
44. Klate Holt Co. <i>b</i> Hampton, Virginia	52	17,163	0.26
45. Westinghouse Electric Corp. Large, Pennsylvania	37	15,908	0.24
46. Grumman Data Systems Corp. Huntsville, Alabama	58	15,246	0.23
47. Northrop Worldwide Aircraft Houston, Texas	51	14,529	0.22
48. Harris Corp. Melbourne, Florida	40	13,252	0.20
49. Argee Corp. Las Cruces, New Mexico	—	13,172	0.20
50. Micro Craft, Inc. <i>b</i> Tullahoma, Tennessee	92	12,559	0.19
Other		1,143,877	17.49
Total Awards to Business Firms		6,540,541	100.00
<i>a</i> Includes awards to RCA Corp.			
<i>b</i> Small business concern.			
<i>c</i> Disadvantaged/minority business firm.			

Table 8-37. Top Fifty Contractors: FY 1988 (in thousands of dollars)

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
1. Rockwell International Corp. Downey, California	1	1,714,205	23.56
2. Lockheed Space Operations Co. Kennedy Space Center, Florida	3	474,338	6.52
3. Morton Thiokol Corp. Brigham City, Utah	4	422,798	5.81
4. Martin Marietta Corp. New Orleans, Louisiana	2	341,047	4.69
5. McDonnell Douglas Corp. Huntington Beach, California	5	299,103	4.11
6. Boeing Co. Marshall Space Flight Center, Alabama	8	260,333	3.58
7. General Electric Co. Princeton, New Jersey	6	211,157	2.90
8. USBI Booster Production Co. Huntsville, Alabama	7	190,700	2.62
9. Lockheed Engineering & Science Corp. Houston, Texas	—	177,776	2.44
10. EG&G Florida Inc. Kennedy Space Center, Florida	12	155,505	2.14
11. AlliedSignal Aerospace Co. Columbia, Maryland	—	152,060	2.09
12. Computer Sciences Corp. Greenbelt, Maryland	16	151,449	2.08
13. TRW, Inc. Redondo Beach, California	13	142,715	1.96
14. Lockheed Missile & Space Co. Sunnyvale, California	15	140,823	1.94
15. Ford Aerospace Corp. Palo Alto, California	14	137,372	1.89
16. United Technologies Corp. West Palm Beach, Florida	9	91,463	1.26
17. IBM Houston, Texas	18	87,262	1.20
18. Contel Corp. Gaithersburg, Maryland	17	75,658	1.04
19. Grumman Aerospace Corp. Reston, Virginia	35	74,134	1.02
20. Pan American World Services, Inc. Stennis Space Center, Mississippi	19	69,977	0.96
21. Planning Research Corp. Hampton, Virginia	22	46,785	0.64

Table 8-37 continued

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
22. Boeing Technical Operations Inc. Houston, Texas	27	41,830	0.57
23. Teledyne Industries, Inc. Marshall Space Flight Center, Alabama	21	39,972	0.55
24. Bamsi, Inc. <i>a</i> Marshall Space Flight Center, Alabama	25	39,878	0.55
25. Sverdrup Technology, Inc. Middleburgh Heights, Ohio	29	37,964	0.52
26. Raytheon Services Co. Greenbelt, Maryland	24	37,725	0.52
27. Perkin Elmer Corp. Danbury, Connecticut	23	30,972	0.43
28. Cray Research, Inc. Chippewa Falls, Wisconsin	57	30,715	0.42
29. Orbital Sciences Corp. <i>b</i> Denver, Colorado	20	26,038	0.36
30. NSI Technology Services Corp. <i>c</i> Moffett Field, California	26	25,123	0.35
31. Sterling Federal Systems, Inc. Moffett Field, California	33	24,930	0.34
32. Fairchild Industries, Inc. Germantown, Maryland	34	24,151	0.33
33. General Dynamics Corp. San Diego, California	31	22,817	0.31
34. Unisys Corp. Greenbelt, Maryland	28	22,645	0.31
35. Aerojet General Corp. Sacramento, California	30	22,159	0.30
36. Klate Holt Co. <i>b</i> Hampton, Virginia	44	20,274	0.28
37. Wyle Laboratories Hampton, Virginia	32	20,259	0.28
38. Ball Corp. Boulder, Colorado	42	19,611	0.27
39. W&J Construction Corp. Kennedy Space Center, Florida	—	19,301	0.27
40. Lockheed Corp. Marietta, Georgia	36	18,519	0.25
41. LTV Aerospace & Defense Co. Dallas, Texas	58	16,789	0.23
42. Continental Construction Corp. <i>b</i> Edwards, California	—	16,491	0.23

Table 8-37 continued

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
43. Krug International Corp. Houston, Texas	55	16,240	0.22
44. Grumman Data Systems Corp. Marshall Space Flight Center, Alabama	46	16,166	0.22
45. Northrop Worldwide Aircraft Houston, Texas	47	15,954	0.22
46. Engineering and Economic Research <i>a, b</i> Beltsville, Maryland	68	15,047	0.21
47. Air Products & Chemicals, Inc. Allentown, Pennsylvania	38	14,876	0.20
48. Singer Co. Houston, Texas	41	14,272	0.20
49. Zero One Systems, Inc. <i>a, b</i> Moffett Field, California	53	13,111	0.18
50. ST System Corp. <i>a, b</i> Hyattsville, Maryland	52	12,777	0.18
Other		1,261,600	15.25
Total Awards to Business Firms		7,274,866	100.00
<i>a</i>	Disadvantaged/minority business firm.		
<i>b</i>	Small business concern.		
<i>c</i>	Formerly Northrop Services, Inc.		

*Table 8-38. Top Fifty Educational and Nonprofit Institutions: FY 1979
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
1. University of California at San Diego La Jolla, California	7	9,501	4.80
2. Massachusetts Institute of Technology Cambridge, Massachusetts	1	8,951	4.52
3. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	2	8,924	4.51
4. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	4	7,047	3.56
5. National Academy of Sciences <i>a</i> Washington, D.C.	6	5,388	2.72
6. Stanford University Stanford, California	5	5,107	2.58
7. University of Michigan Ann Arbor, Michigan	3	4,845	2.45
8. Battelle Memorial Institute <i>a</i> Columbus, Ohio	15	4,513	2.28
9. University of Chicago Chicago, Illinois	8	4,458	2.25
10. University of California at Berkeley Berkeley, California	10	4,319	2.18
11. Harvard University Cambridge, Massachusetts	11	4,314	2.18
12. California Institute of Technology Pasadena, California	12	3,955	2.00
13. Universities Space Research <i>a</i> Washington, D.C.	19	3,640	1.84
14. University of Chile Santiago, Chile	9	3,591	1.81
15. University of Maryland at College Park College Park, Maryland	20	3,476	1.76
16. University of Arizona Tucson, Arizona	23	3,324	1.68
17. University of Wisconsin at Madison Madison, Wisconsin	18	3,257	1.65
18. Purdue University West Lafayette, Indiana	24	3,022	1.53
19. SRI International Corp. <i>a</i> Menlo Park, California	22	2,826	1.43
20. University of Iowa Iowa City, Iowa	13	2,816	1.42
21. University of Hawaii Honolulu, Hawaii	25	2,589	1.31

Table 8-38 continued

Contractor/Place of Contract Performance	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
22. University of Colorado at Boulder Boulder, Colorado	16	2,563	1.29
23. University of California at Los Angeles Los Angeles, California	26	2,562	1.29
24. Princeton University Princeton, New Jersey	34	2,478	1.25
25. University of Texas at Dallas Richardson, Texas	21	2,327	1.18
26. Old Dominion University Norfolk, Virginia	27	2,207	1.12
27. Columbia University New York, New York	17	2,069	1.05
28. University of Texas at Austin Austin, Texas	14	1,913	0.97
29. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	29	1,911	0.97
30. Virginia Polytechnic Institute Blacksburg, Virginia	31	1,787	0.90
31. Cornell University Ithaca, New York	40	1,716	0.87
32. New Mexico State University at Las Cruces Las Cruces, New Mexico	30	1,606	0.81
33. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	32	1,545	0.78
34. University of Southern California Los Angeles, California	65	1,528	0.77
35. George Washington University Washington, D.C.	33	1,511	0.76
36. University of Alabama at Huntsville Huntsville, Alabama	63	1,480	0.75
37. Pennsylvania State University State College, Pennsylvania	53	1,407	0.71
38. Southwest Research Institute <i>a</i> San Antonio, Texas	58	1,322	0.67
39. University of Pittsburgh Pittsburgh, Pennsylvania	51	1,266	0.64
40. Case Western Reserve University Cleveland, Ohio	49	1,256	0.63
41. Ohio State University Columbus, Ohio	62	1,238	0.63

Table 8-38 continued

Contractor/Place of Contract Performance	Rank in FY 1978	Net Value of Awards	
		Amount	Percentage
42. Environmental Research Institute <i>a</i> Ann Arbor, Michigan	47	1,233	0.62
43. University of Illinois at Urbana Urbana, Illinois	46	1,220	0.62
44. Research Triangle Institute <i>a</i> Durham, North Carolina	59	1,185	0.60
45. Johns Hopkins University Baltimore, Maryland	37	1,177	0.59
46. San Jose State University San Jose, California	48	1,165	0.59
47. Georgia Institute of Technology Atlanta, Georgia	50	1,162	0.59
48. California State University at Chico Chico, California	44	1,122	0.57
49. University of Washington Seattle, Washington	39	1,112	0.56
50. Utah State University Logan, Utah	45	1,102	0.56
Other		51,907	26.20
Total Awards to Educational and Nonprofit Institutions		197,940	100.00

a Nonprofit institution.

*Table 8-39. Top Fifty Educational and Nonprofit Institutions: FY 1980
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
1. European Space Agency <i>a</i> Paris, France	52	31,100	12.00
2. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	3	10,748	4.15
3. Massachusetts Institute of Technology Cambridge, Massachusetts	2	10,089	3.89
4. University of California at San Diego La Jolla, California	1	9,670	3.73
5. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	4	7,847	3.03
6. Stanford University Stanford, California	6	7,428	2.87
7. University of Chile Santiago, Chile	14	5,484	2.12
8. California Institute of Technology Pasadena, California	12	5,392	2.08
9. National Academy of Sciences <i>a</i> Washington, D.C.	5	4,661	1.80
10. University of Chicago Chicago, Illinois	9	4,602	1.78
11. University of California at Berkeley Berkeley, California	10	4,472	1.72
12. University of Michigan Ann Arbor, Michigan	7	4,234	1.63
13. University of Wisconsin at Madison Madison, Wisconsin	17	4,176	1.61
14. University of Hawaii Honolulu, Hawaii	21	4,155	1.60
15. Harvard University Cambridge, Massachusetts	11	4,145	1.60
16. Battelle Memorial Institute <i>a</i> Columbus, Ohio	8	4,086	1.58
17. University of Maryland at College Park College Park, Maryland	15	4,048	1.56
18. University of Texas at Austin Austin, Texas	28	3,981	1.54
19. University of Iowa Iowa City, Iowa	20	3,614	1.39
20. University of Arizona Tucson, Arizona	16	3,522	1.36
21. Purdue University West Lafayette, Indiana	18	3,458	1.33

Table 8-39 continued

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
22. University of Colorado at Boulder Boulder, Colorado	22	3,321	1.28
23. Universities Space Research <i>a</i> Columbia, Maryland	13	3,106	1.20
24. University of California at Los Angeles Los Angeles, California	23	2,684	1.04
25. Princeton University Princeton, New Jersey	24	2,461	0.95
26. Virginia Polytechnic Institute Blacksburg, Virginia	30	2,355	0.91
27. University of Washington Seattle, Washington	49	2,265	0.87
28. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	29	2,162	0.83
29. Cornell University Ithaca, New York	31	2,161	0.83
30. University of Alabama at Huntsville Huntsville, Alabama	36	2,066	0.80
31. Columbia University New York, New York	27	2,062	0.80
32. Old Dominion University Norfolk, Virginia	26	1,957	0.75
33. Texas A&M University College Station, Texas	56	1,921	0.74
34. SRI International Corp. <i>a</i> Menlo Park, California	19	1,904	0.73
35. Case Western Reserve University Cleveland, Ohio	40	1,872	0.72
36. Oklahoma State University Stillwater, Oklahoma	67	1,818	0.70
37. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	33	1,780	0.69
38. Pennsylvania State University State College, Pennsylvania	37	1,699	0.66
39. University of Texas at Dallas Richardson, Texas	25	1,655	0.64
40. University of Southern California Los Angeles, California	34	1,585	0.61
41. New Mexico State University at Las Cruces Las Cruces, New Mexico	32	1,579	0.61

Table 8-39 continued

Contractor/Place of Contract Performance	Rank in FY 1979	Net Value of Awards	
		Amount	Percentage
42. Research Triangle Institute <i>a</i> Durham, North Carolina	44	1,572	0.61
43. Franklin Institute <i>a</i> Philadelphia, Pennsylvania	—	1,475	0.57
44. University of Kansas Lawrence, Kansas	—	1,474	0.57
45. Environmental Research Institute <i>a</i> Ann Arbor, Michigan	42	1,464	0.56
46. Ohio State University Columbus, Ohio	41	1,436	0.55
47. Washington University at St. Louis St. Louis, Missouri	50	1,423	0.55
48. Northeast Radio Observatory <i>a</i> Chico, California	82	1,415	0.55
49. Georgia Institute of Technology Atlanta, Georgia	47	1,381	0.53
50. San Jose State University Mountain View, California	46	1,291	0.50
Other		62,930	24.28
Total Awards to Educational and Nonprofit Institutions		259,186	100.00
<i>a</i> Nonprofit institution.			

*Table 8-40. Top Fifty Educational and Nonprofit Institutions: FY 1981
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
1. European Space Agency <i>a</i> Paris, France	1	97,100	27.94
2. Massachusetts Institute of Technology Cambridge, Massachusetts	3	12,406	3.57
3. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	2	9,752	2.81
4. University of California at San Diego La Jolla, California	4	9,453	2.72
5. National Academy of Sciences <i>a</i> Washington, D.C.	9	7,482	2.15
6. Stanford University Stanford, California	6	7,368	2.12
7. University of Chile Santiago, Chile	7	7,000	2.01
8. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	5	6,455	1.86
9. California Institute of Technology Pasadena, California	8	5,526	1.59
10. University of California at Berkeley Berkeley, California	11	5,240	1.51
11. University of Wisconsin at Madison Madison, Wisconsin	13	5,216	1.50
12. University of Chicago Chicago, Illinois	10	4,777	1.38
13. University of Maryland at College Park College Park, Maryland	17	4,755	1.37
14. Johns Hopkins University Baltimore, Maryland	51	4,539	1.31
15. University of Arizona Tucson, Arizona	20	4,527	1.30
16. University of Michigan Ann Arbor, Michigan	12	4,227	1.22
17. University of Colorado at Boulder Boulder, Colorado	22	3,701	1.07
18. Battelle Memorial Institute <i>a</i> Columbus, Ohio	16	3,653	1.05
19. Purdue University West Lafayette, Indiana	21	3,511	1.01
20. Harvard University Cambridge, Massachusetts	15	3,496	1.01
21. Universities Space Research <i>a</i> Columbia, Maryland	23	3,436	0.99

Table 8-40 continued

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
22. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	—	3,368	0.97
23. University of Iowa Iowa City, Iowa	19	3,357	0.97
24. University of Hawaii Honolulu, Hawaii	14	3,347	0.96
25. Princeton University Princeton, New Jersey	25	3,031	0.87
26. University of Washington Seattle, Washington	27	2,924	0.84
27. University of California at Los Angeles Los Angeles, California	24	2,802	0.81
28. Texas A&M University College Station, Texas	33	2,372	0.68
29. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	28	2,364	0.68
30. Cornell University Ithaca, New York	29	2,362	0.68
31. Pennsylvania State University State College, Pennsylvania	38	2,343	0.67
32. University of New Hampshire Durham, New Hampshire	56	2,328	0.67
33. Environmental Research Institute <i>a</i> Ann Arbor, Michigan	45	2,196	0.63
34. Southwest Research Institute <i>a</i> San Antonio, Texas	54	2,127	0.61
35. University of Texas at Austin Austin, Texas	18	2,036	0.59
36. New Mexico State University at Las Cruces Las Cruces, New Mexico	41	2,019	0.58
37. George Washington University Washington, D.C.	60	1,981	0.57
38. SRI International Corp. <i>a</i> Menlo Park, California	34	1,967	0.57
39. Case Western Reserve University Cleveland, Ohio	35	1,923	0.55
40. Virginia Polytechnic Institute Blacksburg, Virginia	26	1,874	0.54
41. Columbia University New York, New York	31	1,868	0.54

Table 8-40 continued

Contractor/Place of Contract Performance	Rank in FY 1980	Net Value of Awards	
		Amount	Percentage
42. Hampton City <i>a</i> Hampton, Virginia	—	1,826	0.53
43. Washington University at St. Louis St. Louis, Missouri	47	1,785	0.51
44. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	37	1,753	0.50
45. Oklahoma State University Stillwater, Oklahoma	36	1,704	0.49
46. University of Southern California Los Angeles, California	40	1,702	0.49
47. University of Texas at Dallas Richardson, Texas	39	1,701	0.49
48. University of Kansas Lawrence, Kansas	44	1,673	0.48
49. University of Alabama at Huntsville Huntsville, Alabama	30	1,648	0.47
50. Old Dominion University Norfolk, Virginia	32	1,642	0.47
Other		69,935	20.12
Total Awards to Educational and Nonprofit Institutions		347,578	100.00

a Nonprofit institution.

*Table 8-41. Top Fifty Educational and Nonprofit Institutions: FY 1982
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
1. European Space Agency <i>a</i> Paris, France	1	55,074	18.62
2. Massachusetts Institute of Technology Cambridge, Massachusetts	2	10,025	3.39
3. National Academy of Sciences <i>a</i> Washington, D.C.	5	8,839	3.01
4. Stanford University Stanford, California	6	8,663	2.93
5. University of California at San Diego La Jolla, California	4	8,049	2.72
6. University of Chile Santiago, Chile	7	7,774	2.63
7. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	3	6,761	2.29
8. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	8	6,488	2.19
9. California Institute of Technology Pasadena, California	9	4,946	1.67
10. University of Maryland at College Park College Park, Maryland	13	4,875	1.64
11. Universities Space Research <i>a</i> Columbia, Maryland	21	4,770	1.61
12. University of California at Berkeley Berkeley, California	10	4,643	1.57
13. University of Chicago Chicago, Illinois	12	4,561	1.54
14. Harvard University Cambridge, Massachusetts	20	4,373	1.48
15. University of Hawaii Honolulu, Hawaii	24	4,244	1.44
16. University of Michigan Ann Arbor, Michigan	16	3,983	1.35
17. University of Arizona Tucson, Arizona	15	3,814	1.29
18. University of Wisconsin at Madison Madison, Wisconsin	11	3,577	1.21
19. University of Colorado at Boulder Boulder, Colorado	17	3,464	1.17
20. University of California at Los Angeles Los Angeles, California	27	3,450	1.17
21. University of Iowa Iowa City, Iowa	23	3,206	1.08

Table 8-41 continued

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
22. Purdue University West Lafayette, Indiana	19	3,162	1.07
23. Texas A&M University College Station, Texas	28	2,784	0.94
24. University of Texas at Austin Austin, Texas	35	2,750	0.93
25. University of New Hampshire Durham, New Hampshire	32	2,709	0.92
26. Case Western Reserve University Cleveland, Ohio	39	2,626	0.89
27. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	29	2,595	0.88
28. Battelle Memorial Institute <i>a</i> Columbus, Ohio	18	2,541	0.86
29. Princeton University Princeton, New Jersey	25	2,479	0.84
30. Virginia Polytechnic Institute Blacksburg, Virginia	40	2,187	0.74
31. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	22	2,158	0.73
32. Pennsylvania State University State College, Pennsylvania	31	2,097	0.71
33. Cornell University Ithaca, New York	30	2,007	0.68
34. New Mexico State University at Las Cruces Las Cruces, New Mexico	36	1,986	0.67
35. Columbia University New York, New York	41	1,978	0.67
36. University of Washington Seattle, Washington	26	1,927	0.65
37. SRI International Corp. <i>a</i> Menlo Park, California	38	1,904	0.64
38. Southwest Research Institute <i>a</i> San Antonio, Texas	24	1,860	0.63
39. Hampton City <i>a</i> Hampton, Virginia	42	1,844	0.62
40. Oklahoma State University Stillwater, Oklahoma	45	1,832	0.62
41. Washington University at St. Louis St. Louis, Missouri	43	1,749	0.59

Table 8-41 continued

Contractor/Place of Contract Performance	Rank in FY 1981	Net Value of Awards	
		Amount	Percentage
42. Research Triangle Institute <i>a</i> Durham, North Carolina	53	1,732	0.59
43. University of Kansas Lawrence, Kansas	48	1,718	0.58
44. University of Alabama at Huntsville Huntsville, Alabama	49	1,685	0.57
45. University of Southern California Los Angeles, California	46	1,685	0.57
46. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	44	1,599	0.54
47. Old Dominion University Norfolk, Virginia	50	1,509	0.51
48. University of Texas at Dallas Richardson, Texas	47	1,492	0.50
49. Rensselaer Polytechnic Institute Troy, New York	57	1,477	0.50
50. Arizona State University Tempe, Arizona	60	1,471	0.50
Other		70,624	23.88
Total Awards to Educational and Nonprofit Institutions		295,746	100.00

a Nonprofit institution.

*Table 8-42. Top Fifty Educational and Nonprofit Institutions: FY 1983
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
1. European Space Agency <i>a</i> Paris, France	1	24,135	7.69
2. Massachusetts Institute of Technology Cambridge, Massachusetts	2	11,862	3.78
3. Stanford University Stanford, California	4	11,170	3.56
4. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	7	10,976	3.50
5. University of California at San Diego La Jolla, California	5	10,659	3.40
6. National Academy of Sciences <i>a</i> Washington, D.C.	3	10,359	3.30
7. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	8	7,903	2.52
8. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	31	7,669	2.44
9. California Institute of Technology Pasadena, California	9	6,211	1.98
10. University of Chile Santiago, Chile	6	5,710	1.82
11. Universities Space Research <i>a</i> Columbia, Maryland	11	5,563	1.77
12. University of Maryland at College Park College Park, Maryland	10	5,515	1.76
13. University of Chicago Chicago, Illinois	13	5,514	1.76
14. University of California at Berkeley Berkeley, California	12	5,385	1.75
15. University of Hawaii Honolulu, Hawaii	15	5,362	1.71
16. University Corporation for Atmospheric Research <i>a</i> Palestine, Texas	—	4,710	1.50
17. University of Wisconsin at Madison Madison, Wisconsin	18	4,610	1.47
18. University of New Hampshire Durham, New Hampshire	25	4,436	1.41
19. University of Michigan Ann Arbor, Michigan	16	4,389	1.40
20. Battelle Memorial Institute <i>a</i> Columbus, Ohio	28	4,323	1.38

Table 8-42 continued

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
21. University of Arizona Tucson, Arizona	17	4,244	1.35
22. University of Colorado at Boulder Boulder, Colorado	19	4,044	1.29
23. Harvard University Cambridge, Massachusetts	14	3,587	1.14
24. University of Iowa Iowa City, Iowa	21	3,544	1.13
25. Oklahoma State University Stillwater, Oklahoma	40	3,334	1.06
26. University of California at Los Angeles Los Angeles, California	20	3,277	1.04
27. Southwest Research Institute <i>a</i> San Antonio, Texas	38	3,215	1.02
28. Case Western Reserve University Cleveland, Ohio	26	3,073	0.98
29. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	27	2,949	0.94
30. Purdue University West Lafayette, Indiana	22	2,788	0.89
31. Texas A&M University College Station, Texas	23	2,715	0.86
32. University of Texas at Austin Austin, Texas	24	2,631	0.84
33. Virginia Polytechnic Institute Blacksburg, Virginia	30	2,569	0.82
34. Johns Hopkins University Baltimore, Maryland	58	2,538	0.81
35. Hampton City <i>a</i> Hampton, Virginia	39	2,376	0.76
36. University of Washington Seattle, Washington	36	2,332	0.74
37. Old Dominion University Norfolk, Virginia	47	2,285	0.73
38. Cornell University Ithaca, New York	33	2,261	0.72
39. SRI International Corp. <i>a</i> Menlo Park, California	37	2,222	0.71
40. New Mexico State University at Las Cruces Las Cruces, New Mexico	34	2,155	0.69

Table 8-42 continued

Contractor/Place of Contract Performance	Rank in FY 1982	Net Value of Awards	
		Amount	Percentage
41. Research Triangle Institute ^a Research Triangle Park, North Carolina	42	2,153	0.69
42. Northeast Radio Observatory Westford, Massachusetts	59	2,107	0.67
43. Columbia University New York, New York	35	1,941	0.62
44. Princeton University Princeton, New Jersey	29	1,933	0.62
45. Howard University Washington, D.C.	61	1,915	0.61
46. Washington University at St. Louis St. Louis, Missouri	41	1,828	0.58
47. George Washington University Washington, D.C.	55	1,815	0.58
48. Ohio State University Columbus, Ohio	53	1,770	0.56
49. Pennsylvania State University State College, Pennsylvania	32	1,660	0.53
50. San Jose State University Mountain View, California	57	1,647	0.52
Other		80,407	25.63
Total Awards to Educational and Nonprofit Institutions		313,776	100.00
^a Nonprofit institution.			

*Table 8-43. Top Fifty Educational and Nonprofit Institutions: FY 1984
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
1. Stanford University Stanford, California	3	13,109	4.08
2. Massachusetts Institute of Technology Cambridge, Massachusetts	2	11,835	3.68
3. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	4	11,803	3.67
4. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	8	11,025	3.43
5. National Academy of Sciences <i>a</i> Washington, D.C.	6	10,793	3.36
6. University of California at San Diego La Jolla, California	5	9,750	3.04
7. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	7	8,404	2.62
8. European Space Agency <i>a</i> Paris, France	1	8,303	2.58
9. University Corporation for Atmospheric Research <i>a</i> Palestine, Texas	16	8,075	2.51
10. Johns Hopkins University Baltimore, Maryland	34	7,793	2.43
11. Universities Space Research <i>a</i> Columbia, Maryland	11	7,356	2.29
12. California Institute of Technology Pasadena, California	9	6,782	2.11
13. University of Chicago Chicago, Illinois	13	6,280	1.95
14. University of Colorado at Boulder Boulder, Colorado	22	5,644	1.76
15. University of Wisconsin at Madison Madison, Wisconsin	17	5,599	1.74
16. University of Michigan Ann Arbor, Michigan	19	5,214	1.62
17. University of Maryland at College Park College Park, Maryland	12	5,180	1.61
18. University of Chile Santiago, Chile	10	5,144	1.60
19. University of Arizona Tucson, Arizona	21	5,051	1.57
20. University of California at Berkeley Berkeley, California	14	4,964	1.55

Table 8-43 continued

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
21. University of Hawaii Honolulu, Hawaii	15	4,516	1.41
22. University of Iowa Iowa City, Iowa	24	4,260	1.33
23. University of New Hampshire Durham, New Hampshire	18	4,256	1.32
24. Southwest Research Institute <i>a</i> San Antonio, Texas	27	3,724	1.16
25. University of California at Los Angeles Los Angeles, California	26	3,712	1.16
26. Case Western Reserve University Cleveland, Ohio	28	3,446	1.07
27. Hampton City <i>a</i> Hampton, Virginia	35	3,338	1.04
28. Battelle Memorial Institute <i>a</i> Columbus, Ohio	20	3,332	1.04
29. University of Texas at Austin Austin, Texas	32	3,223	1.00
30. Harvard University Cambridge, Massachusetts	23	2,934	0.91
31. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	29	2,743	0.85
32. University of Washington Seattle, Washington	36	2,687	0.84
33. New Mexico State University at Las Cruces Las Cruces, New Mexico	40	2,576	0.80
34. SRI International Corp. <i>a</i> Menlo Park, California	39	2,485	0.77
35. Virginia Polytechnic Institute Blacksburg, Virginia	33	2,269	0.71
36. Columbia University New York, New York	43	2,167	0.67
37. Cornell University Ithaca, New York	38	2,137	0.67
38. Mitre Corp. <i>a</i> McLean, Virginia	58	2,079	0.65
39. Old Dominion University Norfolk, Virginia	37	2,055	0.64
40. Utah State University Logan, Utah	62	2,018	0.63

Table 8-43 continued

Contractor/Place of Contract Performance	Rank in FY 1983	Net Value of Awards	
		Amount	Percentage
41. Research Triangle Institute <i>a</i> Research Triangle Park, North Carolina	41	1,979	0.62
42. Washington University at St. Louis St. Louis, Missouri	46	1,950	0.61
43. Princeton University Princeton, New Jersey	44	1,946	0.61
44. Pennsylvania State University State College, Pennsylvania	49	1,912	0.60
45. Texas A&M University College Station, Texas	31	1,887	0.59
46. Northeast Radio Observatory <i>a</i> Westford, Massachusetts	42	1,880	0.59
47. George Washington University Washington, D.C.	47	1,875	0.58
48. Purdue University West Lafayette, Indiana	30	1,863	0.58
49. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	55	1,836	0.57
50. University of Illinois at Urbana Urbana, Illinois	54	1,798	0.56
Other		84,264	26.22
Total Awards to Educational and Nonprofit Institutions		321,251	100.00
<i>a</i> Nonprofit institution.			

*Table 8-44. Top Fifty Educational and Nonprofit Institutions: FY 1985
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
1. Stanford University Stanford, California	1	17,177	4.77
2. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	4	15,581	4.33
3. Massachusetts Institute of Technology Cambridge, Massachusetts	2	14,411	4.00
4. National Academy of Sciences <i>a</i> Washington, D.C.	5	11,750	3.26
5. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	7	11,163	3.10
6. University of California at San Diego La Jolla, California	6	9,462	2.63
7. Universities Space Research <i>a</i> Columbia, Maryland	11	8,843	2.46
8. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	3	8,092	2.25
9. Southwest Research Institute <i>a</i> San Antonio, Texas	24	7,672	2.13
10. University of Michigan Ann Arbor, Michigan	16	7,622	2.12
11. University of Wisconsin at Madison Madison, Wisconsin	15	7,466	2.07
12. Harvard University Cambridge, Massachusetts	30	7,457	2.07
13. University of Colorado at Boulder Boulder, Colorado	14	7,413	2.06
14. California Institute of Technology Pasadena, California	12	7,280	2.02
15. University of Maryland at College Park College Park, Maryland	17	6,520	1.81
16. University of Arizona Tucson, Arizona	19	6,233	1.73
17. University Corporation for Atmospheric Research <i>a</i> Palestine, Texas	9	5,841	1.62
18. University of Hawaii Honolulu, Hawaii	21	5,651	1.57
19. University of Chicago Chicago, Illinois	13	5,372	1.49
20. University of California at Berkeley Berkeley, California	20	5,216	1.45

Table 8-44 continued

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
21. Johns Hopkins University Baltimore, Maryland	10	4,530	1.26
22. University of New Hampshire Durham, New Hampshire	23	4,511	1.25
23. University of California at Los Angeles Los Angeles, California	25	4,309	1.20
24. Battelle Memorial Institute <i>a</i> Columbus, Ohio	28	4,250	1.18
25. University of Iowa Iowa City, Iowa	22	3,989	1.11
26. Hampton City <i>a</i> Hampton, Virginia	27	3,806	1.06
27. New Mexico State University at Las Cruces Las Cruces, New Mexico	33	3,558	0.99
28. University of Chile Santiago, Chile	18	3,519	0.98
29. Case Western Reserve University Cleveland, Ohio	26	3,505	0.97
30. Cornell University Ithaca, New York	37	3,440	0.96
31. Research Triangle Institute <i>a</i> Research Triangle Park, North Carolina	41	3,284	0.91
32. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	31	2,907	0.81
33. University of Texas at Austin Austin, Texas	29	2,905	0.81
34. University of Washington Seattle, Washington	32	2,895	0.80
35. University of Illinois at Urbana Urbana, Illinois	50	2,845	0.79
36. Old Dominion University Norfolk, Virginia	39	2,757	0.77
37. Virginia Polytechnic Institute Blacksburg, Virginia	35	2,682	0.74
38. Princeton University Princeton, New Jersey	43	2,656	0.74
39. Columbia University New York, New York	36	2,640	0.73
40. University of Alabama at Huntsville Huntsville, Alabama	55	2,554	0.71

Table 8-44 continued

Contractor/Place of Contract Performance	Rank in FY 1984	Net Value of Awards	
		Amount	Percentage
41. Pennsylvania State University State College, Pennsylvania	44	2,505	0.70
42. Washington University at St. Louis St. Louis, Missouri	42	2,446	0.68
43. Georgia Institute of Technology Atlanta, Georgia	62	2,310	0.64
44. Oklahoma State University Stillwater, Oklahoma	—	2,214	0.61
45. George Washington University Washington, D.C.	47	2,187	0.61
46. SRI International Corp. <i>a</i> Menlo Park, California	34	2,185	0.61
47. University of Minnesota at Minneapolis St. Paul Minneapolis, Minnesota	49	2,112	0.59
48. Howard University Washington, D.C.	56	2,073	0.58
49. Purdue University West Lafayette, Indiana	48	1,975	0.55
50. Arizona State University Tempe, Arizona	59	1,922	0.53
Other		94,341	26.01
Total Awards to Educational and Nonprofit Institutions		360,034	100.00
<i>a</i> Nonprofit institution.			

*Table 8-45. Top Fifty Educational and Nonprofit Institutions: FY 1986
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
1. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	2	19,728	4.99
2. Stanford University Stanford, California	1	18,324	4.63
3. Massachusetts Institute of Technology Cambridge, Massachusetts	3	12,512	3.16
4. National Academy of Sciences <i>a</i> Washington, D.C.	4	12,228	3.09
5. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	5	12,034	3.04
6. Universities Space Research <i>a</i> Houston, Texas	7	12,000	3.03
7. University of Michigan Ann Arbor, Michigan	10	11,356	2.87
8. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	8	10,179	2.57
9. University of California at Berkeley Berkeley, California	20	9,906	2.51
10. University of Colorado at Boulder Boulder, Colorado	13	9,708	2.45
11. University Corporation for Atmospheric Research <i>a</i> Palestine, Texas	17	8,966	2.27
12. University of Wisconsin at Madison Madison, Wisconsin	11	8,906	2.25
13. University of California at San Diego La Jolla, California	6	8,609	2.18
14. University of Maryland at College Park College Park, Maryland	15	7,873	1.99
15. Southwest Research Institute <i>a</i> San Antonio, Texas	9	7,868	1.99
16. University of Alabama at Huntsville Huntsville, Alabama	40	6,549	1.66
17. University of Arizona Tucson, Arizona	16	6,549	1.66
18. California Institute of Technology Pasadena, California	14	6,364	1.61
19. University of Chicago Chicago, Illinois	19	5,873	1.49
20. University of Hawaii Honolulu, Hawaii	18	5,318	1.35

Table 8-45 continued

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
21. Case Western Reserve University Cleveland, Ohio	29	5,192	1.31
22. New Mexico State University at Las Cruces Las Cruces, New Mexico	27	5,033	1.27
23. University of California at Los Angeles Los Angeles, California	23	4,480	1.13
24. Oklahoma State University Stillwater, Oklahoma	44	4,239	1.07
25. University of Iowa Iowa City, Iowa	25	4,141	1.05
26. Battelle Memorial Institute <i>a</i> Columbus, Ohio	24	3,992	1.01
27. University of Chile Santiago, Chile	28	3,815	0.97
28. Hampton City <i>a</i> Hampton, Virginia	26	3,801	0.96
29. University of Washington Seattle, Washington	34	3,687	0.93
30. Johns Hopkins University Baltimore, Maryland	21	3,477	0.88
31. University of Texas at Austin Austin, Texas	33	3,466	0.88
32. University of New Hampshire Durham, New Hampshire	22	3,451	0.87
33. University of Houston at Clear Lake Houston, Texas	96	3,145	0.80
34. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	32	3,139	0.79
35. Mitre Corp. <i>a</i> McLean, Virginia	65	3,098	0.78
36. Princeton University Princeton, New Jersey	38	2,980	0.75
37. Columbia University New York, New York	39	2,824	0.71
38. Cornell University Ithaca, New York	30	2,795	0.71
39. Pennsylvania State University State College, Pennsylvania	41	2,626	0.66
40. Ohio State University Columbus, Ohio	51	2,623	0.66

Table 8-45 continued

Contractor/Place of Contract Performance	Rank in FY 1985	Net Value of Awards	
		Amount	Percentage
41. University of Illinois at Urbana Urbana, Illinois	35	2,523	0.64
42. University of Houston Houston, Texas	78	2,423	0.61
43. Washington University at St. Louis St. Louis, Missouri	42	2,402	0.61
44. Research Triangle Institute <i>a</i> Research Triangle Park, North Carolina	31	2,367	0.60
45. Virginia Polytechnic Institute Blacksburg, Virginia	37	2,327	0.59
46. Old Dominion University Norfolk, Virginia	36	2,270	0.57
47. Harvard University Cambridge, Massachusetts	12	2,250	0.57
48. University of Alaska at Fairbanks Fairbanks, Alaska	52	2,182	0.55
49. Georgia Institute of Technology Atlanta, Georgia	43	2,113	0.54
50. George Washington University Washington, D.C.	45	2,052	0.52
Other		99,819	25.22
Total Awards to Educational and Nonprofit Institutions		395,582	100.00
<i>a</i> Nonprofit institution.			

*Table 8-46. Top Fifty Educational and Nonprofit Institutions: FY 1987
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
1. Stanford University Stanford, California	2	23,207	5.34
2. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	1	17,737	4.08
3. University of California at Berkeley Berkeley, California	9	13,482	3.10
4. National Academy of Sciences <i>a</i> Washington, D.C.	4	13,337	3.07
5. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	5	13,238	3.05
6. Massachusetts Institute of Technology Cambridge, Massachusetts	3	12,012	2.76
7. Universities Space Research <i>a</i> Houston, Texas	6	11,498	2.65
8. University of Colorado at Boulder Boulder, Colorado	10	10,930	2.52
9. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	8	10,667	2.49
10. University of California at San Diego La Jolla, California	13	9,687	2.23
11. University of Michigan Ann Arbor, Michigan	7	9,470	2.18
12. University of Arizona Tucson, Arizona	17	9,440	2.17
13. Southwest Research Institute <i>a</i> San Antonio, Texas	15	9,277	2.14
14. University of Maryland at College Park College Park, Maryland	14	8,300	1.91
15. University of Wisconsin at Madison Madison, Wisconsin	12	7,195	1.66
16. California Institute of Technology Pasadena, California	18	7,108	1.64
17. University of Alabama at Huntsville Huntsville, Alabama	16	6,537	1.50
18. University of Iowa Iowa City, Iowa	25	6,375	1.47
19. University of Chicago Chicago, Illinois	19	6,257	1.44
20. University Corporation for Atmospheric Research <i>a</i> Palestine, Texas	11	6,255	1.44

Table 8-46 continued

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
21. New Mexico State University at Las Cruces Las Cruces, New Mexico	22	5,748	1.32
22. University of California at Los Angeles Los Angeles, California	23	5,422	1.25
23. University of Hawaii Honolulu, Hawaii	20	5,355	1.23
24. University of New Hampshire Durham, New Hampshire	32	5,283	1.22
25. Case Western Reserve University Cleveland, Ohio	21	5,121	1.18
26. University of Texas at Austin Austin, Texas	31	4,854	1.12
27. Battelle Memorial Institute <i>a</i> Columbus, Ohio	26	4,419	1.02
28. University of Washington Seattle, Washington	29	4,118	0.95
29. Harvard University Cambridge, Massachusetts	47	4,085	0.94
30. Pennsylvania State University State College, Pennsylvania	39	3,817	0.88
31. Mitre Corp. <i>a</i> McLean, Virginia	35	3,807	0.88
32. Hampton City <i>a</i> Hampton, Virginia	28	3,779	0.87
33. Cornell University Ithaca, New York	38	3,667	0.84
34. Johns Hopkins University Baltimore, Maryland	30	3,561	0.82
35. Old Dominion University Norfolk, Virginia	46	3,552	0.82
36. Columbia University New York, New York	37	3,498	0.81
37. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	34	3,357	0.77
38. University of Chile Santiago, Chile	27	3,342	0.77
39. University of Alaska at Fairbanks Fairbanks, Alaska	48	3,287	0.76
40. Princeton University Princeton, New Jersey	36	3,248	0.75

Table 8-46 continued

Contractor/Place of Contract Performance	Rank in FY 1986	Net Value of Awards	
		Amount	Percentage
41. Research Triangle Institute <i>a</i> Research Triangle Park, North Carolina	44	3,032	0.70
42. Ohio State University Columbus, Ohio	40	2,969	0.68
43. Texas A&M University College Station, Texas	56	2,877	0.66
44. San Jose State University Mountain View, California	67	2,679	0.62
45. University of Illinois at Urbana Urbana, Illinois	41	2,561	0.59
46. Oklahoma State University Stillwater, Oklahoma	24	2,521	0.58
47. George Washington University Washington, D.C.	50	2,482	0.57
48. Georgia Institute of Technology Atlanta, Georgia	49	2,402	0.55
49. Virginia Polytechnic Institute Blacksburg, Virginia	45	2,398	0.55
50. University of Houston at Clear Lake Houston, Texas	33	2,263	0.52
Other		112,967	25.94
Total Awards to Educational and Nonprofit Institutions		434,480	100.00
<i>a</i> Nonprofit institution.			

*Table 8-47. Top Fifty Educational and Nonprofit Institutions: FY 1988
(in thousands of dollars)*

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
1. Stanford University Stanford, California	1	27,674	5.54
2. Association of University Research and Astronomy <i>a</i> Baltimore, Maryland	2	23,696	4.74
3. New Mexico State University at Las Cruces Las Cruces, New Mexico	21	19,231	3.85
4. Universities Space Research <i>a</i> Columbia, Maryland	7	16,957	3.39
5. Massachusetts Institute of Technology Cambridge, Massachusetts	6	14,279	2.86
6. University of California at Berkeley Berkeley, California	3	13,633	2.73
7. National Academy of Sciences <i>a</i> Washington, D.C.	4	12,866	2.57
8. University of Arizona Tucson, Arizona	12	12,001	2.40
9. University of Colorado at Boulder Boulder, Colorado	8	11,847	2.37
10. Smithsonian Institution <i>a</i> Cambridge, Massachusetts	9	11,447	2.29
11. Southwest Research Institute <i>a</i> San Antonio, Texas	13	11,361	2.27
12. Charles Stark Draper Laboratory <i>a</i> Cambridge, Massachusetts	5	10,604	2.12
13. University of Maryland at College Park College Park, Maryland	14	9,718	1.94
14. University of Alabama at Huntsville Huntsville, Alabama	17	9,527	1.91
15. University of Wisconsin at Madison Madison, Wisconsin	15	9,232	1.85
16. University of Michigan Ann Arbor, Michigan	11	8,996	1.80
17. University of California at San Diego La Jolla, California	10	8,605	1.72
18. California Institute of Technology Pasadena, California	16	7,890	1.58
19. Case Western Reserve University Cleveland, Ohio	25	7,802	1.56
20. University of Iowa Iowa City, Iowa	18	7,019	1.40

Table 8-47 continued

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
21. University of Hawaii Honolulu, Hawaii	23	6,496	1.30
22. University of California at Los Angeles Los Angeles, California	22	5,873	1.18
23. Pennsylvania State University State College, Pennsylvania	30	5,365	1.07
24. University of Chicago Chicago, Illinois	19	5,362	1.07
25. University of New Hampshire Durham, New Hampshire	24	5,011	1.00
26. University of Houston at Clear Lake Houston, Texas	50	5,004	1.00
27. Harvard University Cambridge, Massachusetts	29	4,791	0.96
28. University of Washington Seattle, Washington	28	4,681	0.94
29. University of Texas at Austin Austin, Texas	26	4,441	0.89
30. University of Southern California Los Angeles, California	55	4,343	0.87
31. Columbia University New York, New York	36	3,733	0.75
32. Old Dominion University Norfolk, Virginia	35	3,731	0.75
33. Johns Hopkins University Baltimore, Maryland	34	3,722	0.74
34. Ohio State University Columbus, Ohio	42	3,705	0.74
35. University of Chile Santiago, Chile	38	3,670	0.73
36. Cornell University Ithaca, New York	33	3,323	0.67
37. Texas A&M University College Station, Texas	43	3,287	0.66
38. Virginia Polytechnic Institute Blacksburg, Virginia	49	3,272	0.65
39. Hampton City <i>a</i> Hampton, Virginia	32	3,166	0.63
40. American Institute of Aeronautics and Astronautics <i>a</i> New York, New York	37	3,109	0.62
41. Princeton University Princeton, New Jersey	40	2,959	0.59

Table 8-47 continued

Contractor/Place of Contract Performance	Rank in FY 1987	Net Value of Awards	
		Amount	Percentage
42. Oklahoma State University Stillwater, Oklahoma	46	2,904	0.58
43. San Jose State University Mountain View, California	44	2,776	0.56
44. University of Alaska at Fairbanks Fairbanks, Alaska	39	2,755	0.55
45. Georgia Institute of Technology Atlanta, Georgia	48	2,746	0.55
46. George Washington University Washington, D.C.	47	2,698	0.54
47. University of Houston Houston, Texas	69	2,657	0.53
48. Battelle Memorial Institute <i>a</i> Moffett Field, California	27	2,580	0.52
49. University of Illinois at Urbana Urbana, Illinois	45	2,502	0.50
50. Cleveland State University Cleveland, Ohio	54	2,236	0.52
Other		132,599	26.47
Total Awards to Educational and Nonprofit Institutions		499,882	100.00

a Nonprofit institution.