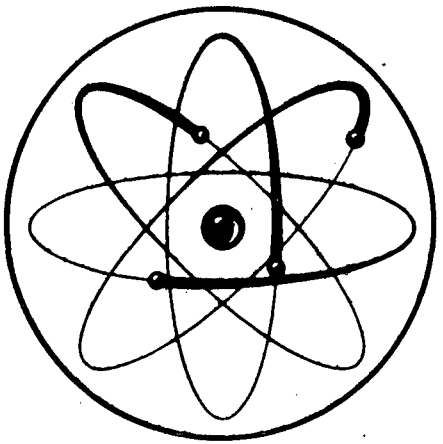
A STATISTICAL SUMMARY OF THE

PHYSICAL RESEARCH PROGRAM

JUNE 30, 1966



DIVISION of RESEARCH

UNITED STATES ATOMIC ENERGY COMMISSION

UNITED STATES ATOMIC ENERGY COMMISSION

A STATISTICAL SUMMARY OF THE PHYSICAL RESEARCH PROGRAM

AS OF JUNE 30, 1966

Prepared by:
Division of Research
November 1966

NOTE: Dollar amounts shown in the following pages reflect AEC Cost-Budget costs for major research centers. For all other types of contracts, dollar estimates are based on budgets approved at time of contract approval or renewal.

TABLE OF CONTENTS

OTHER NON-PROFIT RESEARCH INSTITUTES

INDUSTRIAL LABORATORIES

FOREWORD

The Physical Research Program covers mostly basic research undertaken to discover new scientific knowledge, but also includes some applied investigations undertaken to develop certain aspects of the practical utilization of nuclear energy. The research is in the fields of physics and mathematics, chemistry, metallurgy and materials, and controlled thermonuclear reactions. Approximately three-fourths of the program costs are associated with the support of research conducted in AEC-owned major research centers and a little less than one-fourth of the program costs are associated with the contract support of research carried out in other laboratories. The major portion of the research conducted at sites other than AEC-owned major research centers is conducted at educational institutions.

MAJOR RESEARCH CENTERS

There is no clear line of demarcation between major research centers and other laboratories. The AEC investment in facilities ranges from zero for some contractors to tens of millions of dollars for others, and the annual level of AEC support ranges from a few thousand for some contractors, to tens of millions of dollars for others -- the spectrum is broad with no significant peaks or breaks. For purposes of this report the following are considered major research centers operated for the AEC: (The listing is consistent with "major research centers" as defined for National Science Foundation reports).

	Laboratory	Contractor
1.	Ames Laboratory	Iowa State University
2.	Argonne National Laboratory	University of Chicago
3.	Brookhaven National Laboratory	Associated Universities, Inc.
4.	Cambridge Electron Accelerator	Harvard University & Massachusetts Institute of Technology
5.	Lawrence Radiation Laboratory	University of California
6.	Los Alamos Scientific Laboratory	University of California
7.	Oak Ridge National Laboratory	Union Carbide Corporation
8.	Plasma Physics Laboratory	Princeton University
9.	Princeton-Pennsylvania Accelerator	Princeton University & University of Pennsylvania
10.	Stanford Linear Accelerator Center	Stanford University

Some of the major research centers are engaged in research and development activities other than under the Physical Research Program; namely activities for the Production, Weapons, Biology and Medicine, and Reactor Development Programs. The Physical Research Program at these multiprogram laboratories provides, in varying degrees, the basic investigations underlying the applied and development activities of the individual laboratory. The group also includes some laboratories that are engaged in research in a single, well defined area. Some are "National Laboratories", some are "weapons laboratories", others are "university laboratories." They all have the following common characteristics:

1. They are treated as national facilities.
2. They represent large investments (several millions of dollars) in AEC-owned capital facilities.
3. They have large annual levels (several millions of dollars) of AEC support.
4. It is implicit that they have continuing AEC support.
5. The guidance of smaller scientific efforts within each laboratory is usually vested in the laboratory management with only major overall research guidance supplied by the AEC.

CONTRACT-RESEARCH PROGRAM

In addition to the research conducted at the major research centers, the AEC supports, by means of the contract-research program, research investigations at educational institutions, other non-profit research institutes, and industrial laboratories. In the contract-research program, the Division of Research in AEC Headquarters is responsible for the approval of AEC support and for the review of the technical progress of research projects that fall within the fields of physics and mathematics, chemistry, metallurgy and materials, and controlled thermonuclear reactions. The AEC's field offices negotiate and administer the non-technical aspects of the contracts. Proposals for contracts in basic research are usually initiated by the scientist interested in performing the work.

As a supplement to the AEC's program at the major research centers the contract-research program has a number of distinct benefits:

1. When the amount provided by the AEC is added to the other funds available to the contractor, the effectiveness of the contractor's program, as well as the basic research effort of the AEC's program is increased.

2. The AEC receives the services, in basic research activities fundamental to the AEC's future capabilities, of highly qualified scientists who prefer employment at outside laboratories or who prefer to teach and to do research at educational institutions.

3. The contract-research program, by providing for the conduct of research at educational institutions, contributes to the supply of scientists in fields relevant to the AEC's program.

In conducting this program, the AEC generally uses either a fixed-price or cost-reimbursement contract. The fixed-price contract is used primarily when the annual cost to the AEC is on the order of $250,000 or less and when the cost can be estimated in advance with reasonable accuracy. In consideration for the outside organization carrying out the agreed investigations, the AEC agrees to pay a lump sum based upon an agreed part of the estimated total cost of the project. This total cost estimate is reflected in a budget, submitted by the prospective contractor, that includes such items as salaries, materials and supplies, equipment, travel, communication, publication, and indirect expenses. In most cases, the contractor proposes to share in the cost of the work conducted under the contract.

The cost-type contract provides for the reimbursement, to the extent prescribed in the agreement, of defined costs incurred in the performance of the contract. This type of contract is generally used for large projects with an annual AEC contribution exceeding $250,000, or for projects that do not lend themselves to accurate cost estimates. Under this agreement a total cost estimate is established to provide a base for obligating funds and to stipulate a ceiling that the contractor cannot exceed (except at his own expense) without the approval of additional funds by the AEC. The total costs of the research may be shared by the contractor and the AEC.

Occasionally, no-fund contracts are used in the contract-research program when the AEC loans property to an outside organization as AEC's support to the research project or when the organization wishes to enter into a study contract in a certain area of research before it actually undertakes the research. In addition to these reasons, contracts are sometimes extended without additional funds being added to the contract because the research project is to be terminated and additional time is required to bring the project to an orderly close.

REPORTING RESULTS OF RESEARCH

Scientific reports on the research investigations undertaken under the Physical Research Program are reported in the open literature to the greatest extent practicable. The AEC recognizes open publication and wide dissemination as the normal and most desirable means for reporting the findings of fundamental research.

---------- : : ----------

In the following pages there is presented a statistical analysis of the Physical Research Program. Separate analyses are made for the physical research activities conducted at the AEC's major research centers, at educational institutions, at other non-profit research institutes, and at industrial laboratories.

This report does not include the portion of the Physical Research Program supported through agreements with other Government agencies. On June 30, 1966, there were four such agreements between the AEC and the following Government agencies amounting to a total project cost of $838,502 as follows:

1.	Environmental Science Services Administration	$ 30,000
2.	Geological survey, Department of Interior	39,850
3.	National Bureau of Standards	606,035
4.	Navy -- Bureau of Ships	162,617
	TOTAL	$ 838,502

SUMMARY OF PHYSICAL RESEARCH PROGRAM
(Dollars in Thousands)

Activity	TOTAL Scientific Man-Years a/	Major Research Centers Amount	Major Research Centers Man-Years	Educational Institutions Amount b/	Educational Institutions Man-Years	Research Institutes Amount b/	Research Institutes Man-Years	Industrial Laboratories Amount b/	Industrial Laboratories Man-Years
High Energy Physics	2234.9	$ 97,758	1842.0	$ 16,435	390.9	$ 35	2.0	$ 0	0
Medium Energy Physics	190.6	6,977	123.0	5,333	67.6	-	-	0	0
Low Energy Physics	705.1	17,086	317.0	13,780	379.1	95	4.3	257	4.7
Mathematics & Computers ...	135.3	2,257	60.5	3,610	73.8	25	1.0	0	0
Chemistry	1212.7	42,022	869.0	9,563	319.4	473	18.5	233	5.8
Metallurgy & Materials	586.9	17,095	369.5	8,904	189.2	224	9.1	650	19.1
Controlled Thermonuclear ..	331.4	20,852	289.0	1,904	39.4	48	.4	103	2.6
Other c/.....	0	3,199	0	0	0	0	0	0	0
TOTAL	5396.9	$207,246	3870.0	$ 59,529	1459.4	$ 900	35.3	$ 1,243	32.2

a/ Does not include part time employment of 3,292 students engaged in performing research and/or participating in summer programs.
b/ Represents amount of AEC obligations included in the latest extension of contracts in effect as of 6/30/66. (Contracts are usually written for one year and extended annually if necessary.)
c/ Multi-purpose support equipment.

MAJOR RESEARCH CENTERS

Costs and Manpower
As of June 30, 1966

Laboratory	Total Cost	Scientific Man-Years Permanent	Scientific Man-Years Visiting	Number of Graduate Students Engaged in Research	Number of Publications
Ames Laboratory	$ 7,672,000	142.5	0	207	168
Argonne National Laboratory	41,103,000	661.5	48.5	153	530
Brookhaven National Laboratory	40,683,000	464.5	68.0	23	370
Cambridge Electron Accelerator	9,630,000	337.5	15.5	223	107
Lawrence Radiation Laboratory	42,692,000	678.0	100.0	328	577
Los Alamos Scientific Laboratory	4,627,000	69.0	0	6	38
Oak Ridge National Laboratory	33,015,000	637.0	17.5	32	466
Plasma Physics Laboratory, Princeton U.	6,489,000	80.5	6.0	24	119
Princeton-Pennsylvania Accelerator	8,331,000	391.5	1.0	60	79
Stanford Linear Accelerator Center	13,004,000	138.5	13.0	14	45
TOTAL	$207,246,000	3600.5	269.5	1,070	2,499

AMES LABORATORY

Activity	Total Cost	Scientific Man-Years Permanent	Scientific Man-Years Visiting	Number of Graduate Students Engaged in Research	Number of Publications
High Energy Physics	$ 409,000	9.0	0	6	17
Medium Energy Physics	341,000	6.0	0	4	13
Low Energy Physics	912,000	13.0	0	9	5
Mathematics & Computer	60,000	.5	0	0	0
Chemistry	3,373,000	59.5	0	123	79
Metallurgy & Materials	2,498,000	54.5	0	65	54
Other 1/	79,000	0	0	0	0
TOTAL	$7,672,000	142.5	0	207	168

1/ Multi-purpose support equipment

ARGONNE NATIONAL LABORATORY

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$20,133,000	232.0	21.0	111	98
Medium Energy Physics	270,000	4.5	0	0	7
Low Energy Physics	4,846,000	75.0	6.5	20	78
Mathematics & Computer	1,185,000	30.0	1.5	5	59
Chemistry	9,083,000	208.0	10.5	7	190
Metallurgy & Materials	5,476,000	112.0	9.0	10	98
Other 1/	110,000	0	0	0	0
TOTAL	$41,103,000	661.5	48.5	153	530

1/ Multi-purpose support equipment

BROOKHAVEN NATIONAL LABORATORY

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$24,528,000	252.5	31.5	11	149
Low Energy Physics	4,594,000	53.0	14.0	3	57
Mathematics & Computer	540,000	15.5	1.5	0	9
Chemistry	5,584,000	105.0	13.5	7	82
Metallurgy & Materials	2,754,000	38.5	7.5	2	73
Other 1/	2,683,000	0	0	0	0
TOTAL	$40,683,000	464.5	68.0	23 2/	370

1/ Multi-purpose support equipment
2/ Includes those summer students who are engaged in specifically defined technical activities.

CAMBRIDGE ELECTRON ACCELERATOR

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$ 9,630,000	337.5	15.5	223	107

LAWRENCE RADIATION LABORATORY

Activity	Total Cost	Scientific Man-Years Permanent	Scientific Man-Years Visiting	Number of Graduate Students Engaged in Research	Number of Publications
High Energy Physics	$21,313,000	335.0	55.0	109	187
Medium Energy Physics	1,861,000	28.0	4.0	9	16
Low Energy Physics	350,000	7.0	2.0	9	17
Mathematics & Computer	107,000	4.0	0	0	15
Chemistry	9,911,000	181.0	38.0	138	229
Metallurgy & Materials	1,690,000	41.0	0	56	87
Controlled Thermonuclear	7,133,000	82.0	1.0	7	26
Other 1/	327,000	0	0	0	0
TOTAL	$42,692,000	678.0	100.0	328	577

1/Multi-purpose support equipment

MAJOR RESEARCH CENTERS

LOS ALAMOS SCIENTIFIC LABORATORY

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
Medium Energy Physics	$ 2,302,000	33.0	0	2	22
Controlled Thermonuclear	2,325,000	36.0	0	4	16
TOTAL	$ 4,627,000	69.0	0	6	38

OAK RIDGE NATIONAL LABORATORY

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$ 410,000	8.5	.5	0	2
Medium Energy Physics	2,203,000	47.0	.5	2	37
Low Energy Physics	6,384,000	140.5	6.0	12	142
Mathematics & Computer	365,000	7.0	.5	0	7
Chemistry	14,071,000	248.0	5.5	8	156
Metallurgy & Materials	4,677,000	104.0	3.0	4	77
Controlled Thermonuclear	4,905,000	82.0	1.5	6	45
TOTAL	$33,015,000	637.0	17.5	32	466

PLASMA PHYSICS LABORATORY
Princeton University

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
Controlled Thermonuclear	$ 6,489,000	80.5	6.0	24	119

PRINCETON-PENNSYLVANIA ACCELERATOR

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$ 8,331,000	391.5	1.0	60	79

STANFORD LINEAR ACCELERATOR CENTER

Activity	Total Cost	Scientific Man-Years		Number of Graduate Students Engaged in Research	Number of Publications
		Permanent	Visiting		
High Energy Physics	$13,004,000	138.5	13.0	14	45

Breakdown of the number of contracts, total project and the Contractor and AEC contributions in the Program by Activity
As of June 30, 1966

Activity	Number of Contracts	Total Project Cost	Contractor Contribution	Percent of Total	AEC Contribution	Percent of Total
High Energy Physics	32	$18,873,012	$ 2,438,360	13	$16,434,652	87
Medium Energy Physics	11	6,627,219	1,293,962	20	5,333,257	80
Low Energy Physics	47	16,114,932	2,334,961	14	13,779,971	86
Mathematics & Computer	13	3,982,852	373,275	9	3,609,577	91
Chemistry	231	12,145,064	2,582,198	21	9,562,866	79
Metallurgy & Materials	153	10,807,795	1,903,469	18	8,904,326	82
Controlled Thermonuclear	26	2,140,895	237,269	11	1,903,626	89
TOTAL	513	$70,691,769	$11,163,494	16	$59,528,275	84

EDUCATIONAL INSTITUTIONS

CONSOLIDATED BUDGET OF THE 513 CONTRACTS INCLUDED IN THE PHYSICAL RESEARCH PROGRAM

As of June 30, 1966
(Dollars in Thousands)

	Item of Expense	Total Amount	%	High Energy Physics	%	Medium Energy Physics	%
	Breakdown of Fixed-Price Contracts						
(1)	Salaries and Wages	$13,002	52.0	$ 1,200	48.5	$ 93	37.8
(2)	Equipment	2,365	9.5	323	13.0	35	14.2
(3)	Materials and Supplies	3,457	13.8	402	16.2	80	32.5
(4)	Travel	376	1.5	57	2.3	6	2.5
(5)	Communications	46	.2	4	.2	0	0
(6)	Publication Costs	277	1.1	30	1.2	1	.4
(7)	Indirect Expenses	5,482	21.9	461	18.6	31	12.6
(8)	TOTAL	$25,005	100.0	$ 2,477	100.0	$ 246	100.0
(9)	Contributed by Universities	6,323	25.3	856	34.6	46	18.7
(10)	Supported by AEC	18,682	74.7	1,621	65.4	200	81.3
(11)	Including Unexpended Balance of	812		55		0	
	Breakdown of Cost-Type Contracts						
(12)	Salaries and Wages	$18,419	40.3	$ 6,674	40.7	$ 1,699	26.6
(13)	Equipment	7,977	17.5	1,142	7.0	3,214	50.4
(14)	Materials and Supplies	10,060	22.0	4,875	29.7	844	13.2
(15)	Travel	815	1.8	471	2.9	38	.6
(16)	Communications	157	.3	67	.4	14	.2
(17)	Publication Costs	212	.5	86	.5	19	.3
(18)	Indirect Expenses	8,047	17.6	3,081	18.8	553	8.7
(19)	TOTAL	$45,687	100.0	$16,396	100.0	$ 6,381	100.0
(20)	Contributed by Universities	4,840	10.6	1,582	9.6	1,248	19.6
(21)	Supported by AEC	40,847	89.4	14,814	90.4	5,133	80.4
(22)	Including Unexpended Balance of	460		32		0	

Low Energy Physics	%	Math. and Computer	%	Chemistry	%	Metallurgy and Materials	%	Controlled Thermo-nuclear	%	
$ 1,207	48.3	$ 320	55.2	$ 5,237	53.5	$ 4,139	52.0	$ 806	55.0	(1)
246	9.8	50	8.6	783	8.0	801	10.1	127	8.7	(2)
444	17.8	51	8.8	1,268	13.0	1,077	13.5	135	9.2	(3)
36	1.4	11	1.9	150	1.5	91	1.2	25	1.7	(4)
5	.2	1	.2	19	.2	15	.2	2	.1	(5)
51	2.0	4	.7	106	1.1	74	.9	11	.7	(6)
512	20.5	143	24.6	2,219	22.7	1,756	22.1	360	24.6	(7)
$ 2,501	100.0	$ 580	100.0	$ 9,782	100.0	$ 7,953	100.0	$ 1,466	100.0	(8)
682	27.3	86	14.8	2,545	26.0	1,871	23.5	237	16.2	(9)
1,819	72.7	494	85.2	7,237	74.0	6,082	76.5	1,229	83.8	(10)
54		34		410		238		21		(11)
$ 5,863	43.1	$ 1,408	41.4	$ 1,108	46.9	$ 1,264	44.3	$ 403	59.7	(12)
2,483	18.2	268	7.9	400	16.9	431	15.1	39	5.8	(13)
2,427	17.8	963	28.3	337	14.3	548	19.2	66	9.8	(14)
193	1.4	38	1.1	32	1.3	32	1.1	11	1.6	(15)
49	.4	14	.4	6	.3	6	.2	1	.1	(16)
64	.5	17	.5	14	.6	12	.4	0	0	(17)
2,535	18.6	695	20.4	466	19.7	562	19.7	155	23.0	(18)
$13,614	100.0	$ 3,403	100.0	$ 2,363	100.0	$ 2,855	100.0	$ 675	100.0	(19)
1,653	12.1	287	8.4	37	1.6	33	1.2	0	0	(20)
11,961	87.9	3,116	91.6	2,326	98.4	2,822	98.8	675	100.0	(21)
125		2		23		202		76		(22)

EDUCATIONAL INSTITUTIONS

NUMBER OF SCIENTIFIC EMPLOYEES, GRADUATE STUDENTS & PUBLICATIONS UNDER THE PHYSICAL RESEARCH PROGRAM

Activity	Principal Investigator		Research Associates		Other		Visiting		Graduate Students	Publications
	No.	MY's	No.	MY's	No.	MY's	No.	MY's		
High Energy Physics	93	40.3	170	128.7	357	217.5	8	4.4	398	417
Medium Energy Physics	16	7.5	28	20.8	51	37.8	2	1.5	70	34
Low Energy Physics	84	39.5	160	123.6	362	205.9	17	10.1	407	423
Mathematics & Computer ..	16	6.1	44	34.5	46	32.8	2	.4	63	50
Chemistry	277	96.1	248	188.1	74	29.3	15	5.9	664	651
Metallurgy & Materials ...	182	67.3	103	85.3	77	34.9	4	1.7	553	350
Controlled Thermonuclear .	27	9.1	21	17.2	34	12.3	2	.8	62	64
TOTAL	695	265.9	774	598.2	1001	570.5	50	24.8	2,217	1,989

TYPE OF ORGANIZATION

Contracts with:	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
State Institutions	19	7	24	6	130	78	13	277
Private Institutions	13	4	23	7	99	75	13	234
Municipal Institutions	0	0	0	0	2	0	0	2
TOTAL	32	11	47	13	231	153	26	513

OPERATIONS OFFICES ADMINISTERING THE BUSINESS ASPECTS OF THE CONTRACTS

Operations Offices	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Chicago	10	1	16	4	86	48	2	167
New York	12	4	12	2	71	62	8	171
Oak Ridge	4	4	9	3	47	28	11	106
Richland	0	0	4	1	7	3	1	16
San Francisco	6	2	6	3	20	12	4	53
TOTAL	32	11	47	13	231	153	26	513

EDUCATIONAL INSTITUTIONS

TYPE OF CONTRACT

Type	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Cost	19	10	24	5	9	10	4	81
Lump-Sum	13	1	23	8	222	143	22	432
TOTAL	32	11	47	13	231	153	26	513

CONTRACTS BY AEC DOLLAR LEVEL

Dollar Level	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0	0	0	1	0	0	2	2	5
1 - 9,999	1	0	1	0	20	4	2	28
10,000 - 19,999	1	0	0	0	63	19	3	86
20,000 - 29,999	0	0	2	2	53	38	3	98
30,000 - 39,999	0	1	1	0	30	23	1	56
40,000 - 49,999	0	0	0	2	19	24	2	47
50,000 - 59,999	1	1	6	2	16	5	3	34
60,000 - 69,999	0	0	0	0	5	8	1	14
70,000 - 79,999	0	0	5	0	7	7	1	20
80,000 - 89,999	0	0	1	0	3	5	0	9
90,000 - 99,999	4	0	0	0	2	2	1	9
100,000 - 249,999	5	3	10	2	11	15	6	52
250,000 - 499,999	7	0	9	1	0	1	1	19
500,000 + ...	13	6	11	4	2	0	0	36
TOTAL Contracts	32	11	47	13	231	153	26	513

PERCENT OF AEC CONTRIBUTION TO THE TOTAL COST OF THE RESEARCH

Percentage	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0 - 9	0	0	1	0	0	0	2	3
10 - 19	0	0	0	0	0	0	1	1
20 - 29	0	0	0	0	0	0	0	0
30 - 39	2	0	0	0	1	1	0	4
40 - 49	1	1	1	0	14	0	1	18
50 - 59	2	0	2	0	27	8	0	39
60 - 69	5	1	8	2	52	25	0	93
70 - 79	6	1	12	1	52	55	7	134
80 - 89	4	2	9	5	42	44	5	111
90 - 99	2	1	1	2	12	5	3	26
100*	10	5	13	3	31	15	7	84
TOTAL Contracts	32	11	47	13	231	153	26	513

* Includes those education institutions that as a matter of policy do not list their contribution.

EDUCATIONAL INSTITUTIONS

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Arizona	0	0	1	0	5	2	0	8
Arizona State University	0	0	0	0	1	0	0	1
Arizona, University of	0	0	1	0	4	2	0	7
Arkansas	0	0	0	0	4	0	0	4
Arkansas, University of	0	0	0	0	4	0	0	4
California	5	2	6	3	20	12	4	52
California Inst. of Tech.	1	0	1	0	4	2	0	8
California, University of	4	2	4	2	9	5	2	28
Harvey Mudd College	0	0	0	0	1	0	0	1
San Diego College	0	0	0	0	1	0	0	1
Southern California, U. of	0	0	1	0	2	1	0	4
Stanford University	0	0	0	1	3	4	2	10
Colorado	1	0	1	0	3	1	0	6
Colorado State University	0	0	0	0	1	0	0	1
Colorado, University of	1	0	1	0	2	0	0	4
Denver, U. of (Colorado Seminary).	0	0	0	0	0	1	0	1
Connecticut	1	1	4	0	5	4	1	16
Connecticut, University of	0	0	0	0	1	2	0	3
Yale University	1	1	4	0	4	2	1	13
Delaware	0	0	0	0	1	0	0	1
Delaware, University of	0	0	0	0	1	0	0	1
District of Columbia	0	0	1	0	2	1	0	4
Catholic University	0	0	0	0	1	1	0	2
Georgetown University	0	0	1	0	1	0	0	2

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Florida	2	0	0	0	10	3	2	17
Florida State University	1	0	0	0	6	0	0	7
Florida, University of	0	0	0	0	4	3	0	7
Miami, University of	1	0	0	0	0	0	2	3
Georgia	0	0	0	0	4	1	2	7
Georgia Inst. of Tech.	0	0	0	0	2	1	2	5
Georgia, University of	0	0	0	0	2	0	0	2
Hawaii	1	0	0	0	0	0	0	1
Hawaii, University of	1	0	0	0	0	0	0	1
Illinois	2	0	1	3	17	8	0	31
Chicago, University of	1	0	1	1	4	1	0	8
Illinois Inst. of Tech.	0	0	0	0	5	2	0	7
Illinois, University of	1	0	0	2	4	2	0	9
Northwestern University	0	0	0	0	4	3	0	7
Indiana	1	0	3	0	13	4	0	21
Indiana University	0	0	0	0	6	0	0	6
Notre Dame, University of	0	0	2	0	1	1	0	4
Purdue University	1	0	1	0	6	3	0	11
Iowa	0	0	0	0	2	0	0	2
Dordt College	0	0	0	0	1	0	0	1
Iowa, State University of	0	0	0	0	1	0	0	1
Kansas	0	0	2	0	5	2	0	9
Kansas State University	0	0	1	0	1	0	0	2
Kansas, University of	0	0	1	0	4	2	0	7

EDUCATIONAL INSTITUTIONS

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Kentucky	0	0	0	0	5	0	0	5
Kentucky, University of	0	0	0	0	5	0	0	5
Louisiana	0	0	0	0	2	2	0	4
Louisiana State University	0	0	0	0	2	1	0	3
Loyola University	0	0	0	0	0	1	0	1
Maine	0	0	0	0	1	1	0	2
Maine, University of	0	0	0	0	1	1	0	2
Maryland	1	2	3	1	7	2	2	18
Johns Hopkins University	0	0	2	0	3	1	0	6
Maryland, University of	1	2	1	1	4	1	2	12
Massachusetts	4	0	1	0	12	9	3	29
Boston University	0	0	0	0	1	0	0	1
Brandeis University	1	0	0	0	2	0	0	3
Clark University	0	0	0	0	1	0	0	1
Harvard University	0	0	0	0	2	0	0	2
Massachusetts Inst. of Tech.	2	0	1	0	4	9	3	19
Tufts University	1	0	0	0	1	0	0	2
Worcester Polytechnic Institute ..	0	0	0	0	1	0	0	1
Michigan	2	0	2	0	10	10	1	25
Andrews University	0	0	0	0	0	1	0	1
Michigan State University	1	0	1	0	4	4	0	10
Michigan Technological Univ.	0	0	0	0	0	2	0	2
Michigan, University of	1	0	1	0	4	2	1	9
Wayne State University	0	0	0	0	2	1	0	3

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Minnesota	1	1	1	0	2	4	0	9
Minnesota, University of	1	1	1	0	2	3	0	8
St. Mary's College	0	0	0	0	0	1	0	1
Mississippi	0	0	0	0	0	1	0	1
Mississippi, University of	0	0	0	0	0	1	0	1
Missouri	0	0	0	1	4	2	0	7
Missouri, University of	0	0	0	0	0	2	0	2
Washington University	0	0	0	1	4	0	0	5
Montana	0	0	0	0	0	1	0	1
Montana State University	0	0	0	0	0	1	0	1
Nebraska	0	0	1	0	1	1	0	3
Nebraska, University of	0	0	1	0	1	1	0	3
New Hampshire	0	0	0	0	1	0	0	1
New Hampshire, University of	0	0	0	0	1	0	0	1
New Jersey	0	0	1	1	6	1	2	11
Princeton University	0	0	1	0	4	0	0	5
Rutgers University	0	0	0	0	2	1	0	3
Stevens Inst. of Tech.	0	0	0	1	0	0	2	3
New Mexico	0	0	0	0	2	0	0	2
New Mexico Highlands University ..	0	0	0	0	1	0	0	1
New Mexico, University of	0	0	0	0	1	0	0	1

EDUCATIONAL INSTITUTIONS

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
New York	5	2	4	1	30	28	1	71
Brooklyn, Poly. Inst. of	0	0	0	0	2	0	0	2
Clarkson College of Tech.	0	0	0	0	3	0	0	3
Columbia University	1	1	2	0	7	4	0	15
Cornell University	1	0	1	0	3	11	0	16
Fordham University	0	0	0	0	2	0	0	2
New York, City University of	0	0	0	0	2	1	0	3
New York, State University of	1	0	0	0	5	0	0	6
New York University	0	0	0	1	1	1	1	4
Rensselaer Polytechnic Inst.	0	0	0	0	2	7	0	9
Rochester, University of	1	1	1	0	1	1	0	5
Syracuse University	1	0	0	0	0	2	0	3
Yeshiva University	0	0	0	0	2	1	0	3
North Carolina	1	0	3	1	1	4	0	10
Duke University	1	0	2	1	1	0	0	5
North Carolina State of the University of North Carolina	0	0	0	0	0	2	0	2
North Carolina, University of	0	0	1	0	0	1	0	2
Wake Forest College	0	0	0	0	0	1	0	1
North Dakota	0	0	0	0	0	1	0	1
North Dakota, University of	0	0	0	0	0	1	0	1
Ohio	2	0	1	0	10	4	0	17
Case Institute of Technology	1	0	1	0	3	2	0	7
Kent State University	0	0	0	0	0	1	0	1
Ohio State Univ. Research Found...	1	0	0	0	5	1	0	7
Ohio University	0	0	0	0	1	0	0	1
Western Reserve University	0	0	0	0	1	0	0	1

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Oklahoma	0	0	0	0	3	4	0	7
Oklahoma State University	0	0	0	0	3	0	0	3
Oklahoma, University of	0	0	0	0	0	4	0	4
Oregon	0	0	3	1	3	1	0	8
Oregon State University	0	0	1	1	1	1	0	4
Oregon, University of	0	0	2	0	1	0	0	3
Reed College	0	0	0	0	1	0	0	1
Pennsylvania	1	1	0	0	10	14	1	27
Carnegie Inst. of Tech.	1	1	0	0	2	4	0	8
Duquesne University	0	0	0	0	1	0	0	1
Lehigh University	0	0	0	0	1	0	0	1
Pennsylvania State University	0	0	0	0	2	5	0	7
Pennsylvania, University of	0	0	0	0	2	1	0	3
Pittsburgh, University of	0	0	0	0	1	3	0	4
Swarthmore College	0	0	0	0	0	0	1	1
Temple University	0	0	0	0	1	1	0	2
Puerto Rico	0	0	0	0	1	2	0	3
Puerto Rico, University of	0	0	0	0	1	2	0	3
Rhode Island	1	0	1	0	2	3	0	7
Brown University	1	0	1	0	2	2	0	6
Rhode Island, University of	0	0	0	0	0	1	0	1
South Carolina	0	0	0	0	2	1	0	3
Clemson University	0	0	0	0	0	1	0	1
South Carolina, University of	0	0	0	0	2	0	0	2

EDUCATIONAL INSTITUTION

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
Tennessee	0	0	0	0	8	2	1	11
Fisk University	0	0	0	0	1	0	0	1
Tennessee, University of	0	0	0	0	4	1	1	6
Vanderbilt University	0	0	0	0	3	1	0	4
Texas	0	2	2	1	4	1	3	13
Rice University	0	0	1	1	1	0	0	3
Texas A&M University	0	2	0	0	1	0	0	3
Texas Christian University	0	0	0	0	0	1	0	1
Texas, University of	0	0	1	0	2	0	3	6
Utah	0	0	0	0	3	5	0	8
Brigham Young University	0	0	0	0	1	0	0	1
Utah, University of	0	0	0	0	2	5	0	7
Vermont	0	0	0	0	0	1	0	1
Vermont, University of	0	0	0	0	0	1	0	1
Virginia	0	0	1	0	0	4	1	6
Roanoke College	0	0	0	0	0	0	1	1
Virginia, University of	0	0	1	0	0	4	0	5
Washington	0	0	1	0	4	1	1	7
Washington State University	0	0	0	0	2	0	1	3
Washington, University of	0	0	1	0	1	1	0	3
Western Washington State College..	0	0	0	0	1	0	0	1

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Medium Energy Physics	Low Energy Physics	Math and Computer	Chemistry	Metallurgy & Materials	Controlled Thermo-nuclear	Division Total
West Virginia	0	0	0	0	0	1	0	1
West Virginia University	0	0	0	0	0	1	0	1
Wisconsin	1	0	2	0	6	4	1	14
Marquette University	0	0	0	0	0	1	0	1
Wisconsin, University of	1	0	2	0	6	3	1	13
Wyoming	0	0	1	0	0	0	0	1
Wyoming, University of	0	0	1	0	0	0	0	1
TOTAL	32	11	47	13	231	153	26	513

Breakdown of the number of contracts, total project and the Contractor and AEC contribution in the Program by Activity
As of June 30, 1966

Activity	Number of Contracts	Total Project Cost	Contractor Contribution	Percent of Total	AEC Contribution	Percent of Total
High Energy Physics	1	$ 35,000	$ 0	0	$ 35,000	100
Low Energy Physics	2	153,900	58,900	38	95,000	62
Mathematics & Computer	1	24,778	0	0	24,778	100
Chemistry	5	571,967	98,957	17	473,010	83
Metallurgy & Materials	6	258,555	33,989	13	224,566	87
Controlled Thermonuclear	1	48,000	0	0	48,000	100
TOTAL	16	$1,092,200	$ 191,846	18	$ 900,354	82

CONSOLIDATED BUDGET OF THE 16 CONTRACTS
INCLUDED IN THE PHYSICAL RESEARCH PROGRAM
As of June 30, 1966
(Dollars in Thousands)

RESEARCH INSTITUTES

Item of Expense	Total Amount	%	High Energy Physics	%	Low Energy Physics	%	Math	%	Chemistry	%	Met. & Mat'ls	%	Controlled Thermo-nuclear	%
Breakdown of Fixed-Price Contracts														
Salaries and Wages	$ 258	48.0	$ 0		$ 75	58.1	$ 11	44.0	$ 67	38.3	$ 81	50.6	$ 24	50.0
Equipment	47	8.8	0		1	.8	0	0	45	25.7	1	.6	0	0
Materials and Supplies	53	9.8	0		15	11.6	3	12.0	13	7.4	18	11.3	4	8.3
Travel	5	.9	0		1	.8	0	0	1	.6	2	1.3	1	2.1
Communications	2	.4	0		1	.8	0	0	0	0	1	.6	0	0
Publication Costs	6	1.1	0		2	1.5	0	0	3	1.7	0	0	1	2.1
Indirect Expenses	166	31.0	0		34	26.4	11	44.0	46	26.3	57	35.6	18	37.5
TOTAL	$ 537	100.0	$ 0		$ 129	100.0	$ 25	100.0	$ 175	100.0	$ 160	100.0	$ 48	100.0
Contributed by Institutes	118	22.0	0		39	30.2	0	0	45	25.7	34	21.3	0	0
Supported by AEC	419	78.0	0		90	69.8	25	100.0	130	74.3	126	78.7	48	100.0
Including Unexpended Balance of	20		0		0		0		0		20		0	
Breakdown of Cost-Type Contracts														
Salaries and Wages	$ 266	47.9	25	71.4	$ 3	12.0	$ 0		$ 186	46.8	$ 52	53.1	$ 0	
Equipment	0		0		0		0		0		0		0	
Materials and Supplies	89	16.0	0	0	3	12.0	0		57	14.4	29	29.6	0	
Travel	25	4.5	4	11.4	13	52.0	0		7	1.8	1	1.0	0	
Communications	1	.2	0	0	1	4.0	0		0	0	0	0	0	
Publication Costs	1	.2	0	0	0	0	0		0	0	1	1.0	0	
Indirect Expenses	173	31.2	6	17.2	5	20.0	0		147	37.0	15	15.3	0	
TOTAL	$ 555	100.0	$ 35	100.0	$ 25	100.0	$ 0		$ 397	100.0	$ 98	100.0	$ 0	
Contributed by Institutes	74	13.3	0	0	20	80.0	0		54	13.6	0	0	0	
Supported by AEC	481	86.7	35	100.0	5	20.0	0		343	86.4	98	100.0	0	
Including Unexpended Balance of	0		0		0		0		0		0		0	

NUMBER OF SCIENTIFIC EMPLOYEES, GRADUATE STUDENTS AND PUBLICATIONS UNDER THE PHYSICAL RESEARCH PROGRAM

Activity	Scientific Employees		Graduate Students	Publications
	Number	Man-Years		
High Energy Physics	2	2.0	0	0
Low Energy Physics	7	4.3	0	2
Mathematics & Computer	3	1.0	2	0
Chemistry	24	18.5	1	29
Metallurgy & Materials	56	9.1	0	10
Controlled Thermonuclear	3	.4	0	4
TOTAL	95	35.3	3	45

OPERATIONS OFFICES ADMINISTERING THE BUSINESS ASPECTS OF THE CONTRACTS

Operations Offices	High Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Chicago	1	0	1	1	3	0	6
New York	0	1	0	2	3	0	6
Oak Ridge	0	0	0	1	0	0	1
San Francisco	0	0	0	1	0	1	2
Washington	0	1	0	0	0	0	1
TOTAL	1	2	1	5	6	1	16

TYPE OF CONTRACT

Type	High Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Cost	1	1	0	2	3	0	7
Lump-sum	0	1	1	3	3	1	9
TOTAL	1	2	1	5	6	1	16

RESEARCH INSTITUTIONS

CONTRACTS BY AEC DOLLAR LEVEL

Dollar Level	High Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0	0	0	0	0	0	0	0
1 - 9,999	0	1	0	0	0	0	1
10,000 - 19,999	0	0	0	0	0	0	0
20,000 - 29,999	0	0	1	2	1	0	4
30,000 - 39,999	1	0	0	1	3	0	5
40,000 - 49,999	0	0	0	0	1	1	2
50,000 - 59,999	0	0	0	0	1	0	1
60,000 - 69,999	0	0	0	0	0	0	0
70,000 - 79,999	0	0	0	0	0	0	0
80,000 - 89,999	0	0	0	1	0	0	1
90,000 - 99,999	0	1	0	0	0	0	1
100,000 - 249,999	0	0	0	0	0	0	0
250,000 - 499,999	0	0	0	1	0	0	1
500,000 + ...	0	0	0	0	0	0	0
TOTAL Contracts	1	2	1	5	6	1	16

PERCENTAGE OF AEC CONTRIBUTION TO THE TOTAL COST OF THE RESEARCH

Percentage	High Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0 - 9	0	0	0	0	0	0	0
10 - 19	0	0	0	0	0	0	0
20 - 29	0	1	0	0	0	0	1
30 - 39	0	0	0	0	0	0	0
40 - 49	0	0	0	1	0	0	1
50 - 59	0	0	0	0	0	0	0
60 - 69	0	1	0	0	1	0	2
70 - 79	0	0	0	0	1	0	1
80 - 89	0	0	0	1	0	0	1
90 - 99	0	0	0	1	0	0	1
100	1	0	1	2	4	1	9
TOTAL Contracts	1	2	1	5	6	1	16

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	High Energy Physics	Low Energy Physics	Math	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Alabama	0	0	0	1	0	0	1
Southern Research Institute ...	0	0	0	1	0	0	1
California	0	0	0	1	0	1	2
Stanford Research Institute ...	0	0	0	1	0	1	2
Connecticut	0	0	0	1	0	0	1
New England Institute for Medical Research	0	0	0	1	0	0	1
District of Columbia	0	1	0	0	0	0	1
National Academy of Sciences ..	0	1	0	0	0	0	1
Illinois	1	0	0	1	0	0	2
Associated Midwest Universities	1	0	0	0	0	0	1
IIT Research Institute	0	0	0	1	0	0	1
Missouri	0	0	1	0	0	0	1
Midwest Research Institute	0	0	1	0	0	0	1
Ohio	0	0	0	0	3	0	3
Battelle Memorial Institute ...	0	0	0	0	3	0	3
Pennsylvania	0	1	0	1	3	0	5
Franklin Institute	0	1	0	0	2	0	3
Mellon Institute	0	0	0	1	1	0	2
TOTAL	1	2	1	5	6	1	16

Breakdown of the number of contracts, total project and the Contractor and AEC contribution in the Program by Activity
As of June 30, 1966

Activity	Number of Contracts	Total Project Cost	Contractor Contribution	Percent of Total	AEC Contribution	Percent of Total
Low Energy Physics	2	$ 393,660	$ 136,800	35	$ 256,860	65
Chemistry	1	233,041	0	0	233,041	100
Metallurgy & Materials	5	768,482	119,125	16	649,357	84
Controlled Thermonuclear	3	103,343	0	0	103,343	100
TOTAL	11	$1,498,526	$ 255,925	17	$1,242,601	83

CONSOLIDATED BUDGET OF THE 11 CONTRACTS
INCLUDED IN THE PHYSICAL RESEARCH PROGRAM — INDUSTRIAL LABORATORIES
As of June 30, 1966
(Dollars in Thousands)

Item of Expenses	Total Amount	%	Low Energy Physics	%	Chemistry	%	Metallurgy & Materials	%	Controlled Thermo-nuclear	%
Breakdown of Fixed-Price Contracts										
Salaries and Wages	$ 169	29.9	$ 39	15.2	$ 0		$ 117	42.4	$ 13	39.4
Equipment	29	5.1	29	11.3	0		0	0	0	0
Materials and Supplies	142	25.1	133	51.7	0		5	1.8	4	12.1
Travel	3	.5	2	.8	0		1	.4	0	0
Communications	0	0	0	0	0		0	0	0	0
Publication Costs	1	.2	0	0	0		1	.4	0	0
Indirect Expenses	222	39.2	54	21.0	0		152	55.0	16	48.5
TOTAL	$ 566	100.0	$ 257	100.0	$ 0		$ 276	100.0	$ 33	100.0
Contributed by Laboratories	256	45.2	137	53.3	0		119	43.1	0	0
Supported by AEC	310	54.8	120	46.7	0		157	56.9	33	100.0
Including Unexpended Balance of	10		0		0		10		0	
Breakdown of Cost-Type Contracts										
Salaries and Wages	$ 354	37.9	$ 42	30.7	$ 92	39.5	$ 193	39.2	$ 27	38.6
Equipment	21	2.3	0	0	10	4.3	11	2.2	0	0
Materials and Supplies	88	9.4	38	27.7	19	8.1	25	5.1	6	8.6
Travel	5	.6	1	.7	3	1.3	1	.2	0	0
Communications	2	.2	1	.7	1	.4	0	0	0	0
Publication Costs	7	.8	0	0	3	1.3	4	.8	0	0
Indirect Expenses	456	48.8	55	40.2	105	45.1	259	52.5	37	52.8
TOTAL	$ 933	100.0	$ 137	100.0	$ 233	100.0	$ 493	100.0	$ 70	100.0
Contributed by Laboratories	0	0	0	0	0	0	0	0	0	0
Supported by AEC	933	100.0	137	100.0	233	100.0	493	100.0	70	100.0
Including Unexpended Balance of	1		0		0		0		1	

NUMBER OF SCIENTIFIC EMPLOYEES, GRADUATE STUDENTS AND PUBLICATIONS UNDER THE PHYSICAL RESEARCH PROGRAM

Activity	Scientific Employees		Graduate Students	Publications
	Number	Man-Years		
Low Energy Physics	12	4.7	2	12
Chemistry	6	5.8	0	13
Metallurgy & Materials	26	19.1	0	36
Controlled Thermonuclear	7	2.6	0	3
TOTAL	51	32.2	2	64

OPERATIONS OFFICES ADMINISTERING
THE BUSINESS ASPECTS OF THE CONTRACTS

Operations Offices	Low Energy Physics	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Chicago	0	1	2	0	3
New York	0	0	3	3	6
Oak Ridge	1	0	0	0	1
San Francisco	1	0	0	0	1
TOTAL	2	1	5	3	11

TYPE OF CONTRACT

Type	Low Energy Physics	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
Cost	1	1	1	2	5
Lump-Sum	1	0	4	1	6
TOTAL	2	1	5	3	11

INDUSTRIAL LABORATORIES

CONTRACTS BY AEC DOLLAR LEVEL

Dollar Level	Low Energy Physics	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0	0	0	0	1	1
1 - 9,999	0	0	0	0	0
10,000 - 19,999	0	0	0	0	0
20,000 - 29,999	0	0	2	0	2
30,000 - 39,999	0	0	0	1	1
40,000 - 49,999	0	0	1	0	1
50,000 - 59,999	0	0	1	0	1
60,000 - 69,999	0	0	0	1	1
70,000 - 79,999	0	0	0	0	0
80,000 - 89,999	0	0	0	0	0
90,000 - 99,999	0	0	0	0	0
100,000 - 249,999	2	1	0	0	3
250,000 - 499,999	0	0	1	0	1
500,000 +	0	0	0	0	0
TOTAL Contracts	2	1	5	3	11

PERCENTAGE OF AEC CONTRIBUTION TO THE TOTAL COST OF THE RESEARCH

Percentage	Low Energy Physics	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
0 - 9	0	0	0	1	1
10 - 19	0	0	0	0	0
20 - 29	0	0	0	0	0
30 - 39	0	0	0	0	0
40 - 49	1	0	0	0	1
50 - 59	0	0	3	0	3
60 - 69	0	0	0	0	0
70 - 79	0	0	0	0	0
80 - 89	0	0	0	0	0
90 - 99	0	0	0	0	0
100	1	1	2	2	6
TOTAL Contracts	2	1	5	3	11

NUMBER OF CONTRACTS BY STATES AND CONTRACTORS

State and Contractor	Low Energy Physics	Chemistry	Metallurgy & Materials	Controlled Thermonuclear	Division Total
California	1	1	1	0	3
Atomics International	0	1	1	0	2
General Dynamics Corporation	1	0	0	0	1
Connecticut	0	0	0	1	1
United Aircraft Corporation	0	0	0	1	1
Massachusetts	0	0	1	0	1
Little, Arthur D., Incorporated	0	0	1	0	1
Minnesota	0	0	1	0	1
Litton Systems, Incorporated	0	0	1	0	1
New York	0	0	1	0	1
International Business Machines Corp.	0	0	1	0	1
Pennsylvania	0	0	1	2	3
Westinghouse Electric Corporation	0	0	1	2	3
Texas	1	0	0	0	1
Texas Nuclear Corporation	1	0	0	0	1
TOTAL	2	1	5	3	11

GPO 913-544