# APPENDIX D

# Other than Basic Research Grants **EDUCATION IN THE SCIENCES**

# TEACHERS

CORNELL UNIVERSITY, Ithaca, N.Y.; C. L. Comar; 11 months; \$50,700

University of Minnesota, Minneapolis; Will M. Myers, St. Paul; 10 months; \$46,300

# ACADEMIC YEAR INSTITUTES FOR JUNIOR COLLEGE TEACHERS

University of the Pacific, Stockton, Calif.; Emerson G. Cobb; 10 months; \$101,000

#### FOR SEC-ACADEMIC YEAR INSTITUTES ONDARY SCHOOL AND COLLEGE TEACHERS

HARVARD UNIVERSITY, Cam Victor Guillemin, Jr.; \$2,470 Cambridge, Mass.;

Victor Guillemin; 1 year; \$318,500 LOUISIANA STATE UNIVERSITY, Baton Rouge; Houston T. Karnes; 11 months; \$282,800

OHIO STATE UNIVERSITY, Columbus; John S. Richardson: 11 months: \$289.900

OKLAHOMA STATE UNIVERSITY, Stillwater: James H. Zant: 14 months; \$236,105 OREGON STATE UNIVERSITY, Corvallis; Stan-

ley E. Williamson; 11 months; \$294,910 SYRACUSE UNIVERSITY, Syracuse, N.Y.; Alfred T. Collette; 14 months; \$287,000

Alfred T. Collette; 11 months; \$6,200 UNIVERSITY OF COLORADO, Boulder; John M.

Cleveland; 11 months; \$302,900 University of Illinois, Urbana; Joseph

Landin; 1 year; \$310,800 University of Michigan, Ann Arbor; Alfred

M. Elliott; 11 months; \$284,000 UNIVERSITY OF TEXAS, Austin; Robert N

Little; 1 year; \$263,400

## ACADEMIC YEAR INSTITUTES FOR SECONDARY SCHOOL TEACHERS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; J. G. Potter; 11 months; \$189,600

AGRICULTURAL AND TECHNICAL COLLEGE OF NORTH CAROLINA, Greensboro; Gerald A. Edwards: 9 months; \$121,275

ARIZONA STATE UNIVERSITY, Tempe; Alan T. Wager: 11 months; \$278,800

ATLANTA UNIVERSITY, Atlanta, Ga.; K. A. Huggins; 11 months; \$266,800

BOSTON COLLEGE, Chestnut Hill, Stanley J. Bezuszka; 10 months; \$235,500 BOWDOIN COLLEGE, Brunswick, Maine; Reinhard L. Korgen; \$2,900

BOWLING GREEN STATE UNIVERSITY, Bowling Green, Ohio, Bruce R. Vogeli; 11 months; \$199,100

ACADEMIC YEAR INSTITUTES FOR COLLEGE! BROWN UNIVERSITY, Providence, R.I.; Elmer R. Smith; 11 months; \$275,700

> CORNELL UNIVERSITY, Ithaca, N.Y.; Damon Boynton; 1 year; \$251,400

> FISK UNIVERSITY, Nashville, Tenn.; Myron B. Towns; 9 months; \$113,900

> ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago : L. R. Wilcox : 1 year : \$103,800

> KANSAS STATE TEACHERS COLLEGE, poria; Ted F. Andrews; 1 year; \$207,800 MICHIGAN STATE UNIVERSITY, East Lansing; John M. Mason: 11 months: \$271.500

NEW MEXICO HIGHLANDS UNIVERSITY. Vegas; E. Gerald Meyer; 11 months; \$287,600

PENNSYLVANIA STATE UNIVERSITY. sity Park; William H. Powers: 10 months: \$189,864

RUTGERS, THE STATE UNIVERSITY; New Brunswick, N.J.; Robert E. Bryan; 11 Robert E. Bryan; 11 months; \$193,740

SAN DIEGO STATE COLLEGE FOUNDATION, San Diego, Calif.; Gerald A. Becker; 11 months; \$167,500

SAN JOSE STATE COLLEGE FOUNDATION, San Jose, Calif.; Leonard Feldman; 10 months; \$140,875

University, Stanford, STANFORD STANFORD UNIVERSITY, STREETING, Carrier Harold M. Bacon; 9 months; \$286,300 STATE COLLEGE OF IOWA, Cedar Falls; Robert A. Rogers; 11 months; \$301,110

STATE UNIVERSITY OF SOUTH DAKOTA, Vermillion; Charles M. Vaughn; 11 months; \$303,400

TEMPLE UNIVERSITY, Philadelphia, Pa.; E. L. Offenbacher; 11 months; \$167,900

TEXAS WOMAN'S UNIVERSITY, Denton; Dixie Young; 11 months; \$63,400

UNIVERSITY OF DETROIT, Mich.; Lyle E. Mehlenbacher; 11 months; \$146,200

University of Georgia, Athens; Jonathan J. Westfall; 10 months; \$280,900

UNIVERSITY OF HAWAII, Honolulu; Michael M. Frodyma; 9 months; \$110,400

University of Mississippi, University; Noel A. Childress: 10 months; \$189,400

University of New Mexico. Albuquerque; Wilson H. Ivins; 1 year; \$280,900

University of North Carolina, Chapel Hill; E. C. Markham; 10 months, \$299,800 UNIVERSITY OF NORTH DAKOTA, Grand Forks; J. Donald Henderson; 11 months; \$254,300

University of Notre Dame, Notre Dame, Ind.; Arnold E. Ross; 11 months, \$258,600 University of Pennsylvania, Philadelphia; J. F. Hazel; 11 months; \$271,200

UNIVERSITY OF PUERTO RICO, Rio Piedras; Mariano Garcia; 10 months; \$133,900
UNIVERSITY OF SOUTH CAROLINA, Columbia; W. L. Williams; 1 year; \$192,000
UNIVERSITY OF TENNESSEE, Knoxville; James A. Cooley; 1 year; \$147,600
UNIVERSITY OF UTAH, Salt Lake City; Thomas J. Parimley; 11 months; \$261,000
UNIVERSITY OF VIRGINIA, Charlottesville; James W. Cole, Jr.; 11 months; \$277,941
UNIVERSITY OF WISCONSIN, Madison; Henry Van Engen; 1 year; \$74,700
WASHINGTON UNIVERSITY, St. Louis, Mo.;

WASHINGTON UNIVERSITY, St. Louis, Mo.; E. U. Condon; 14 months; \$280,200 WESLEYAN UNIVERSITY, Middletown, Conn.;

Joseph S. Daltry; 1 year; \$83,700
WEST VIRGINIA UNIVERSITY, Morgantown;
James B. Hickman: 10 months: \$167,000

### **ADVANCED SCIENCE SEMINARS**

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; B. C. Moore; 6 weeks; \$34,950

AMERICAN PHYTOPATHOLOGICAL SOCIETY, Yonkers, N.Y.; William B. Hewitt, University of California, Davis; 1 week; \$620

AMERICAN SOCIETY OF ZOOLOGISTS, Urbana, Ill.; Curt Stern, University of California; 1 week; \$5,060

BERMUDA BIOLOGICAL STATION FOR RESEARCH, INC., St. George's West, Bermuda; Keith E. Chave, Lehigh University; 6 weeks; \$8,200

BRANDEIS UNIVERSITY, Waltham, Mass.; Saul Barshay; 6 weeks; \$42,420

CARNEGE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Alan J. Perlis; \$5,620

FLORIDA STATE UNIVERSITY, Tallahassee; Charles R. Storey, Jr.; 8 weeks; \$38,470

HARVARD UNIVERSITY, Cambridge, Mass.; William Liller; 11 weeks; \$15,170

ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Richard S. Hartenberg, Northwestern University; 8 weeks; \$38,700

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; D. L. Blackstone, Jr., University of Wyoming; 16 months; \$50,000

NEW YORK STATE COLLEGE OF AGRICULTURE, CORNELL UNIVERSITY, Ithaca, N.Y.; W. F. Mai; 5 weeks; \$25,240

PENNSYLVANIA STATE UNIVERSITY, University Park; G. W. Brindley; 2 weeks; \$8,555 PRINCETON UNIVERSITY, Princeton, N.J.; Melvin B. Gottlieb; 6 weeks; \$48,000

RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; Hardy L. Shirley, Syracuse; 10 months; \$19,875

University of Colorado, Boulder; Wesley E. Brittin; 16 months; \$53,710

UNIVERSITY OF DENVER, Denver, Colo.; William M. Mueller; Colorado Seminary; 8 weeks; \$40,545

UNIVERSITY OF FLORIDA, Gainesville; Per-Olov Lowdin; 9 months; \$4,000

Robert E. Uhrig; 8 weeks; \$35,990 UNIVERSITY OF HOUSTON, Houston, Tex.; Elliott I. Organick; 8 weeks; \$42,690

UNIVERSITY OF PUERTO RICO, Rio Piedras; UNIVERSITY OF KANSAS, Lawrence; E. R. Mariano Garcia; 10 months; \$133,900 | Hall; 12 weeks; \$2,000

G. Baley Price; 8 weeks; \$39,380

University of Maryland, College Park; Hugh D. Sisler; 6 weeks; \$56,190

University of Noeth Carolina, Chapel Hill; John W. Carr III; 1 year; \$3,000

UNIVERSITY OF OLAHOMA RESEARCH INSTITUTE, Norman; William E. Bittle; 8 weeks; \$7,355

University of Oregon, Eugene; A. F. Moursund; 8 weeks; \$40,450

UNIVERSITY OF ROCHESTER, Rochester, N.Y.; Leonard Gillman; 8 weeks; \$40,200

University of Southern California, Los Angeles; Jay M. Savage; 8 weeks; \$41,690 University of Texas, Austin; Howard T. Odum, Port Aransas; 2 months; \$9,000

VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg; James B. Eades, Jr.; \$7,500 C. I. Rich; 4 weeks; \$40,160

WOODS HOLE OCEANOGRAPHIC INSTITUTE, Woods Hole, Mass.; Melvin E. Stern; 3 months; \$30,500

YALE UNIVERSITY, New Haven, Conn.; Dirk Brouwer; 6 weeks; \$46,930

Talbot H. Waterman; 14 weeks; \$20,360

# COORDINATED SUMMER AND IN-SERVICE INSTITUTES

ADELPHI COLLEGE, Garden City, N.Y.; H. A. Robinson; 11 months; \$111,310

Donald Solitar; 11 months; \$72,200

BOSTON COLLEGE, Chestnut Hill, Mass.; Stanley J. Bezuszka; 10 months; \$74,120
BOWLING GREEN STATE UNIVERSITY, Bowling

BOWLING GREEN STATE UNIVERSITY, Bowling Green, Ohio; Bruce R. Vogeli; 1 year; \$65,270

EAST TEXAS STATE COLLEGE, Commerce; Charles S. Rohrer; 1 year; \$93,220 FLORIDA STATE UNIVERSITY, Tallahassee; J.

Stanley Marshall; 11 months; \$123,580
FORDHAM UNIVERSITY, New York, N. Y.:

Charles J. Lewis; 10 months; \$72,640 HOWARD PAYNE COLLEGE, Brownwood, Tex.;

Leonard R. Daniel; 11 months; \$56,350

MONTCLAIR STATE COLLEGE, Upper Montclair, N.J.; Max A. Sobel; 1 year; \$86,830

NORTH TEXAS STATE UNIVERSITY, Denton; Robert C. Sherman; 11 months; \$91,550 UNIVERSITY OF ALABAMA, University; Julian D. Mancill; 1 year; \$160,740

UNIVERSITY OF BUFFALO, Buffalo, N.Y.; Harriet F. Montague; 10 months; \$54,680 UNIVERSITY OF DETROIT, Detroit, Mich.; Everette L. Henderson; 11 months; \$65,720

Lyle E. Mehlenbacher, 1 year; \$62,950 UNIVERSITY OF MARYLAND, College Park; James A. Hummel and Richard A. Good; 11 months; \$52,690

University of New Hampshire, Durham; Shepley L. Ross; 11 months; \$89,180

UNIVERSITY OF PURBTO RICO, Mayaguez; Virgilio Biaggi, Jr.; 11 months; \$46,430 UNIVERSITY OF SANTA CLARA, Santa Clara, Calif.; Gerald L. Alexanderson and Irving

Sussman; 11 months; \$79,300 UNIVERSITY OF TOLEDO, Toledo, Ohio; Archie N. Solberg; 11 months; \$74,150 WAYNE STATE UNIVERSITY, Detroit, Mich.; Karl W. Folley; 1 year; \$76,080

WESTERN KENTUCKY STATE COLLEGE, Bowling Green; Ward C. Sumpter; 11 months; \$93,680

WESTERN MICHIGAN UNIVERSITY, Kalamazoo; James H. Powell, 11 months; \$78,560

POLYTECHNIC WORCESTER INSTITUTE. Worcester, Mass., Richard F. Morton; 11 months; \$96,650

# COOPERATIVE COLLEGE-SCHOOL SCIENCE **PROGRAM**

CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; E. M. Williams; 32 weeks; \$29,-975

CHAPMAN COLLEGE, Orange, Calif.; Peter Coad; 9 weeks; \$7,945

Peter Coad; 39 weeks; \$5,695

CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, N.Y.; Robert D. Larsson; 10 weeks; \$1,400

N.Y.; COLGATE UNIVERSITY. Hamilton. Robert E. Todd; 6 weeks; \$19,650

COLUMBIA UNIVERSITY, New York, N.Y.; Donald Barr; 28 weeks; \$45,000

CORNELL UNIVERSITY, Ithaca, N.Y.; Philip G. Johnson; 18 months; \$4,500

Philip G. Johnson; 25 weeks; \$22,890 EAST TEXAS STATE COLLEGE, Commerce, Tex.: William W. Taylor: 35 weeks: \$7,215 FAIRMONT STATE COLLEGE, Fairmont, W. Va.;

James A. LaRue, 34 weeks; \$10,730 LOUISIANA STATE UNIVERSITY, Baton Rouge,

La.; Harry J. Bennett; 5 weeks; \$22,725 LOYOLA UNIVERSITY OF LOS ANGELES, LOS Angeles, Calif.; Clarence J. Wallen; 30

weeks; \$5,490 MANHATTAN COLLEGE, New York, N.Y.; C. Leonard O'Connor; 30 weeks; \$12,310

MILLARD FILLMORE RESEARCH INSTITUTE, Buffalo, N.Y.; Elemer R. Gabrieli; 8 weeks; \$1,375

NATIONAL CHILDREN'S CARDIAC HOSPITAL, Miami, Fla.; Milton S. Saslaw; 32 weeks; \$11,625

NEW ENGLAND COLLEGE, Henniker, N.H.; Harold C. Downes; 20 weeks; \$4,600

NEW YORK UNIVERSITY, New York; Alfred Perlmutter; 6 weeks; \$18,220

NORTH DAKOTA STATE UNIVERSITY, Fargo; Donald Schwartz; 36 weeks; \$2,260

NORTHEAST MISSOURI STATE TEACHERS COL-LEGE, Kirksville; Dean A. Rosebery; 9 weeks;

\$18,600 OKLAHOMA STATE UNIVERSITY, Stillwater; Robert C. Fite; 8 weeks; \$27,500

ST. CLOUD STATE COLLEGE, St. Cloud, Minn.;

Philip Youngner; 5 weeks; \$25,165 ST. JOHN'S UNIVERSITY, Jamaica, N.Y.; Vincent E. Smith; 34 weeks; \$13,515

N.Y.; UNIVERSITY OF BUFFALO, Buffalo, Joseph G. Hoffman; 46 weeks; \$28,190

UNIVERSITY OF MIAMI, Coral Gables, Fla.; Herman Meyer; 32 weeks; \$9,915

University of North Carolina, Chapel Hill; W. A. Reid, Raleigh; 6 weeks; \$22,-945

UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa. : John R. Jablonski ; 52 weeks ; \$32,735

UNIVERSITY OF PUERTO RICO, Rio l'iedras; Mariano Garcia; 36 weeks; \$5,660

UNIVERSITY OF RHODE ISLAND, Kingston; James E. Casey; 22 weeks; \$12,405

University of Virginia, Charlottesville; A. R. Kuhlthau; 8 weeks; \$8,275

Bart van't Riet; 4 months; \$16,372

VIRGINIA STATE COLLEGE, Petersburg; Paul L. Brown, Norfolk; 6 weeks; \$17,550

WALDEMAR MEDICAL RESEARCH FOUNDATION, Port Washington, N.Y.; Norman Molomut; 16 weeks; \$9,560

Norman Molomut; 8 weeks; \$22,110

WESTERN MICHIGAN UNIVERSITY, Kalamazoo; George G. Mallinson; 30 weeks; \$7,370

WEST VIRGINIA WESLEYAN COLLEGE, Buckhannon; John C. Wright; 5 weeks; \$19,100

# COURSE CONTENT STUDIES AND DEVELOP-MENT

AMERICAN ANTHROPOLOGICAL ASSOCIATION, Washington, D.C.; Malcolm Collier, University of Chicago: A Project for the Development of the Educational Potential of Anthropology in the High Schools; 2 years; \$59,950

AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; John R. Mayor; The Development of Science Teaching Materials for the Elementary and Junior High School Grades; 8 months: \$125,000

William P. Viall: Regional Conferences of School Administrators of New Science Curricula; 1 year; \$106,800

AMERICAN ASSOCIATION OF PHYSICS TRACH-ERS, Greencastle, Ind.; Malcolm Correll; Review Conference on The Commission on College Physics; 1 year; \$21,665

AMERICAN INSTITUTE OF BIOLOGICAL SCI-ENCES. Washington, D.C.; H. Bentley Glass; Secondary-School Program of The Biological Study; Sciences Curriculum 1 year: \$2,022,600

AMERICAN SOCIETY FOR ENGINEERING EDUCA-TION, Newark, N.J.; Joseph A. Pask, University of California; A Study of Objective Criteria in Ceramic Engineering Education; 1 year; \$29,000

BRYN MAWR COLLEGE, Bryn Mawr, Pa.; Walter C. Michels; Commission on College Physics; 1 year; \$125,900

CARLETON COLLEGE, Northfield, Minn.; Kenneth O. May; Experimental Pregraduate Training Program in Mathematics; 4 years; \$28,750

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; James B. Reswick; Development of Dynamics Course Using Analog Computers; 1 year; \$30,000

CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, N.Y.; Hilbert Schenck, Jr.; Development of Apparatus and Instructional Methods for an "Interdisciplinary Laboratory to Teach Experimentation in Engineering"; 1 year: \$19.090

COLUMBIA UNIVERSITY, New York, Howard Levi; Development of a New Course in Analysis for College Freshmen; 10 months; \$9,090

Howard Levi; Development of a New Course in Analysis for College Freshmen; \$3,510

CORNELL UNIVERSITY, Ithaca, N.Y.; R. J. Walker; Experimental Teaching Program in Algebra; 1 year; \$13,660

EDUCATIONAL SERVICES INC., Watertown, Mass.; Paul F. Chenea, Purdue University; The Central Office Activities of the Commission on Engineering Education; 1 year; \$87,300

Url Haber-Schaim; Extension of the Physical Science Study Committee Physics Course for Use in Colleges and Junior Colleges; 1 year; \$141,000

Philip Morrison, Cornell University; Elementary School Science Curriculum Project; 1 year; \$298,200

Campbell L. Searle, Massachusetts Institute of Technology; Semiconductor Electronics Education Committee; 1 year; \$126,800

Jerrold R. Zacharias; Development of Alternate Battery of PSSC Tests; 18 months; \$60.150

Jerrold R. Zacharias, Massachusetts Institute of Technology; The Accumulation and Analysis of Feedback for the PSSC Course; 1 year; \$40,500

FORDHAM UNIVERSITY, New York, N.Y.; Charles J. Lewis; Development of a New Set of Courses in Mathematics and Physics; 2 years; \$25,260

HARVEY MUDD COLLEGE, Claremont, Calif.; Joseph B. Platt; Engineering Course Experimentation; 1 year; \$32,660

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; Kurt S. Lion; Development Program for a Laboratory Course in Instrumentation; 1 year; \$27,680

MATHEMATICAL ASSOCIATION OF AMERICA, Buffalo, N.Y.; R. C. Buck, University of Wisconsin; Committee on the Undergraduate Program in Mathematics; 2 years; \$126,500

MICHIGAN STATE UNIVERSITY, East Lansing; Robert G. Hoopes; Undergraduate Science for the Non-Science Major; 9 months; \$28,630

MINNESOTA ACADEMY OF SCIENCE, Austin; Paul C. Rosenbloom; Study of Secondary-School Mathematics Curricula; 2 years; \$187,730

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; H. Burr Steinbach; Committee on Educational Policies in Agriculture; 3 years; \$90,000

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS, Washington, D.C.; Frank B. Allen, Lyons Township High School, La Grange, Ill.; Regional Conferences of School Supervisors of the New Curriculum in Mathematics; 1 year; \$8,490

NEW MEXICO STATE UNIVERSITY, University Park; Ralph Crouch; Development of Course in the Number System for Elementary School Teachers; 16 mos; \$34.060

PURDUE UNIVERSITY, Lafayette, Ind.; Raymond Cohen; Development of Prototype Equipment for a Modern Undergraduate Mechanical Engineering Measurement Laboratory; 18 months; \$27,610

P. W. McFadden; Development of Prototype Equipment for a Typical Undergraduate Heat and Mass Transfer Laboratory; 1 year; \$18,330 STANFORD UNIVERSITY, Stanford, Calif.; E. G. Begle; The School Mathematics Study Group; 2 years; \$1,216,880

STATE COLLEGE OF IOWA, Cedar Falls; E. Glenadine Gibb; Development of Teacher Training Materials in Mathematics; 10 months; \$5,000

TULANE UNIVERSITY, New Orleans, La.; A. D. Wallace; Development of New Undergraduate Courses in Mathematics; 1 year; \$25.760

UNIVERSITY OF CALIFORNIA, Berkeley; David G. Mandelbaum; Educational Resources in Anthropology Project; \$13,840 George C. Pimentel: Ohemical Education

George C. Pimentel; Chemical Education Material Study; 22 months; \$961,110

Robert C. Stebbins; Elementary-School Science Project: 2 years: \$169.560

University of Illinois, Urbana; J. Myron Atkin and Stanley P. Wyatt, Jr.; Elementary-School Science Course Content Improvement Project; 3 years; \$319,300

Max Beberman; University of Illinois Committee on School Mathematics; 1 year \$385,820

H. A. Laitinen; Development of Modern Undergraduate Analytical Chemistry Course; 3 years; \$43,130

UNIVERSITY OF KANSAS, Lawrence; G. Baley Price; Development of Courses on Probability, Matrices, and Calculus; 2 years; \$71,600

UNIVERSITY OF MARYLAND, College Park; John R. Mayor; Development of a New Course in Mathematics for Prospective Elementary School Teachers; 3 years; \$65,710 UNIVERSITY OF MICHIGAN, Ann Arbor; H. R. Crane; Two Conferences on Curricula for Undergraduate Majors in Physics; 1 year; \$24,100

E. Wendell Hewson; Development of a Course in Computer Applications in the Atmospheric Sciences; 26 months; \$42,100

UNIVERSITY OF PENNSYLVANIA, Philadelphia; Charles C. Price; Commission for College Chemistry; 2 years; \$48,220

UNIVERSITY OF WICHITA, Wichita, Kans.; Robert Schrag; Development of an Undergraduate Course in Field and Flow Systems; 15 months; \$15,350

Webster College, Webster Groves, Mo.: Robert B. Davis; Development of Materials for Elementary Mathematics; 1 year; \$43,360

### **DEVELOPMENTAL PROGRAM**

AMBRICAN ASTRONOMICAL SOCIETY, Princeton, N.J.; Frank K. Edmondson; Conference on Graduate Education in Astronomy; 2 days; \$12,390

REED COLLEGE, Portland, Oreg.; Arthur F. Scott; Summer Program in Inorganic Chemistry; 8 weeks; \$55,900

UNIVERSITY OF OKLAHOMA, Norman; Walter J. Saucier; Training Program in Meteorology; 3 years; \$43,680

### FOREIGN PARTICIPATION

AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; John Mayor; 1 year; \$70,000

AMERICAN ASTRONOMICAL SOCIETY, Princeton, N.J.; Thornton Page; 3 years; \$86,625

AMBRICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Hiden T. Cox; 30 months; \$101,020

SYRACUSE UNIVERSITY, Syracuse, N.Y.; Alfred T. Collette; 10 weeks; \$12,100

# IN-SERVICE INSTITUTE FOR ELEMENTARY SCHOOL TEACHERS

AMERICAN MUSEUM OF NATURAL HISTORY, New York, N.Y.; Franklyn M. Branley; 4 months; \$2,980

ALAMEDA COUNTY STATE COLLEGE AUXILIARY ENTERPRISES, INC., Hayward, Calif.; John D. Hancock; 9 months; \$7,430

BUCKNELL UNIVERSITY, Lewisburg, Pa.; Lester Kieft; 9 months \$6,250

CALVIN COLLEGE, Grand Rapids, Mich.; Carl J. Sinke; 9 months; \$3,940

COLORADO COLLEGE, Colorado Springs; Richard G. Beidleman; 9 months; \$5,080

DOMINICAN COLLEGE OF SAN RAFAEL, San Rafael, Calif.; Mary Augusta; 8 months; \$4,460

FLORIDA STATE UNIVERSITY, Tallahassee; Eugene D. Nichols; 8 months; \$7,090

FONTBONNE COLLEGE, St. Louis, Mo.; Mary Teresine Lewis: 8 months: \$4,600

GENERAL EXTENSION DIVISION, OREGON STATE SYSTEM OF HIGHER EDUCATION, Portland; J. Richard Byrne, Portland State College; 9 months; \$4,430

Humboldt State College Foundation, Arcata, Calif.; Orval M. Klose; 9 months; \$7,230

INDIANA STATE COLLEGE, Terre Haute; John C. Hook; 9 months, \$6,520

KANSAS STATE TEACHERS COLLEGE, Emporia; Ted F. Andrews: 9 months; \$8,150

NORTHEAST MISSOURI STATE TEACHERS COLLEGE, Kirksville; Dean A. Rosebery; 9 months; \$5,830

NORTHEASTERN UNIVERSITY, Boston, Mass.; Benjamin C. Friedrich; 9 months; \$7,090 OKLAHOMA STATE UNIVERSITY, Stillwater; Claude W. Gatewood; 9 months; \$6,490 OREGON COLLEGE OF EDUCATION, MONMOUTH;

Ernie L. Cummins; 9 months; \$5,250
RESEARCH FOUNDATION OF STATE UNIVERSITY
OF NEW YORK, Albany; Emery L. Will, One-

onta; 9 months; \$5,400 RHODE ISLAND COLLEGE, Providence; Renato E. Leonelli; 9 months; \$5,600

SACRAMENTO STATE COLLEGE FOUNDATION, Sacramento, Calif.; H. Stewart Moredock; 9 months; \$6,060

St. Augustine's College, Raleigh, N.C.; Prezell R. Robinson; 9 months; \$5,930

ST. MARY'S COLLEGE OF CALIFORNIA, St. Mary's College; T. Brendan; 9 months; \$4.790

St. Paul's College, Lawrenceville, Va.; M. Boyd Jones; 9 months; \$4,800

SAN FERNANDO VALLEY STATE COLLEGE FOUN-DATION, Northridge, Calif.; Marion Bickford; 9 months; \$8,440

SAN JOSE STATE COLLEGE FOUNDATION, SAN JOSE, Calif.; W. H. Myers; 9 months; \$6,240 SOUTHEASTERN STATE COLLEGE, Durant, Okla.; Leslie A. Dwight; 9 months; \$6,300

STATE COLLEGE OF IOWA, Cedar Falls; E. Glenadine Gibb; \$765

STATE UNIVERSITY OF IOWA, IOWA City; T. R. Porter; 7 months; \$6,340

STATE UNIVERSITY OF SOUTH DAKOTA, Vermillion; Theodore L. Reid; 9 months; \$13.210

TEMPLE UNIVERSITY, Philadelphia, Pa.; Herman C. Kranzer; 10 months; \$6,030

UNIVERSITY OF AKRON, Akron, Ohio; Alfred H. Johnson; 9 months; \$5,780

University of Arizona, Tucson; Arthur H. Steinbrenner: 9 months; \$5,500

University of California, Berkeley; Clifford Bell, Los Angeles; 8 months; \$6,650

UNIVERSITY OF COLORADO, Boulder; James R. Wailes: 8 months; \$5,820

University of Detroit, Detroit, Mich. Lyle E. Mehlenbacher; 9 months; \$6,170

UNIVERSITY OF PUERTO RICO, Rio Piedras; Mariano Garcia; 9 months; \$5,880

VIRGINIA STATE COLLEGE, Petersburg; Richard H. Dunn; 9 months; \$6,190

# IN-SERVICE INSTITUTE FOR JUNIOR HIGH SCHOOL TEACHERS

KNOX COLLEGE, Galesburg, III.; Rothwell Stephens; 9 months; \$9,000

MANCHESTER COLLEGE, North Manchester, Ind.; Harry R. Weimer; 8 months; \$9,850 RICKER COLLEGE, Houlton, Maine; Robert B. Maxwell; 9 months; \$9,300

UNIVERSITY OF WISCONSIN, Madison; Louis F. McAuley: 7 months; \$41,340

# IN-SERVICE INSTITUTE FOR SECONDARY AND ELEMENTARY SCHOOL TEACHERS

MILES COLLEGE, Birmingham, Ala.; James S. Sutton; 9 months; \$8,730

University of Florida, Gainesville; Kenneth P. Kidd; 10 months; \$14,520

UNIVERSITY OF HAWAII, Honolulu; Michael M. Frodyma; 9 months; \$11,720

I. Frodyma ; 9 months ; \$11,720 Michael M. Frodyma ; 8 months ; \$17,340

# IN-SERVICE INSTITUTE FOR SECONDARY SCHOOL TEACHERS

AGRICULTURE AND MECHANICAL COLLEGE OF TEXAS, College Station; Edmund C. Klipple; 9 months; \$5,890

Melvin C. Schroeder; 9 months; \$9,530

AGRICULTURAL AND TECHNICAL COLLEGE OF NORTH CAROLINA, Greensboro; George C. Royal, Jr.; 9 months; \$9,130

ALAMEDA COUNTY STATE COLLEGE AUXILIARY ENTERPRISES, INC., Hayward, Calif.; C. T. Purvis; 9 months; \$6,790

ALBANY STATE COLLEGE, Albany, Ga.; William E. Johnson, Jr.; 9 months; \$17,870

ALBERTUS MAGNUS COLLEGE, New Haven, Conn.; Florence D. Jacobson; 8 months; \$14,850

ALBRIGHT COLLEGE, Reading, Pa.; Richard J. Kohlmeyer; 9 months; \$6,250

ALLEGHENY COLLEGE, Meadville, Pa.; Rich-

ard L. Brown; 6 months; \$3,600
ALVERNO COLLEGE, Milwaukee, Wis.; M. Providencia; 9 months; \$4,170

AMERICAN UNIVERSITY, Washington, D.C.; Leo Schubert; 9 months; \$2,460 Leo Schubert: 9 months: \$22,830 Andrews University, Berrien Springs, Mich.; Harold T. Jones; 8 months; \$400 ANTIOCH COLLEGE, Yellow Springs, Ohio; James F. Corwin; 10 months; \$9,280 ARIZONA STATE UNIVERSITY, Tempe: Ernest E. Snyder; 9 months; \$12,180 Alan T. Wager; 9 months; \$6,940 ARKANSAS STATE TEACHERS COLLEGE, Conway; Neal D. Buffaloe; 9 months; \$7,330 O. L. Hughes; 9 months; \$7,000 AUSTIN PEAT STATE COLLEGE, Clarksville, Tenn.; Haskell C. Phillips; 9 months; \$9,110 BALDWIN-WALLACE COLLEGE, Berea, Ohio; Dean L. Robb; 9 months; \$5,990 BEMIDJI STATE COLLEGE, Bemidji, Minn.; W. Richard Slinkman; \$520 W. Richard Slinkman; 9 months; \$17,130 BISHOP COLLEGE, Dallas, Tex.: V. N. Athavale: 9 months: \$16,660 BOSTON COLLEGE, Chestnut Hill, Mass.; William G. Guindon; 9 months; \$5,950 William G. Guindon; 9 months; \$1,630 BOWLING GREEN STATE UNIVERSITY, Bowling Green, Ohio; W. H. Hall; 9 months; \$13,130 BROOKLYN COLLEGE, Brooklyn, N.Y.; Meyer Jordan; 9 months; \$6,870 BROWN UNIVERSITY, Providence, Charles B. MacKay; 9 months; \$6,220 R.I.; Charles B. MacKay: 9 months: \$7,200 BUCKNELL UNIVERSITY, Lewisburg, Pa.; William K. Smith; 9 months; \$5,820 BUTLER UNIVERSITY, Indianapolis, Ind.; Harry E. Crull; 9 months; \$12,520 CALIFORNIA STATE COLLEGE, California, Pa.; A. H. Anderson; 9 months; \$14,250 Calvin College, Grand Rapids, Mich.; Carl J. Sinke; 9 months; \$7,570 CATHOLIC UNIVERSITY OF PUERTO Ponce, P.R.; Joseph Frohnhoefer; 10 months; \$8,820 CENTRAL MICHIGAN UNIVERSITY, Mount Pleasant; Malcolm H. Filson; 10 months; Wilbur Waggoner; 9 months; \$22,560 CENTRAL STATE COLLEGE, Edmond, Okla.: Earl C. Rice; 9 months; \$10,550 CITY COLLEGE, New York, N.Y.; Sherburne F. Barber; 9 months; \$7,430 Alexander Joseph; 9 months; \$9,800 Chester B. Kremer; 9 months; \$11,380 W. I. Pearman; \$780 CLEMSON COLLEGE, Clemson, S.C.; J. Harvey Hobson; 9 months; \$10,070 COLLEGE OF THE HOLY CROSS, Worcester, Mass.; John W. Flavin; 8 months; \$6,200 Robert B. MacDonnell; 8 months; \$6,390 Vincent O. McBrien; 8 months; \$6,760 COLLEGE OF IDAHO, Caldwell; Boyd H. Henry; 9 months; \$9,690 COLORADO SCHOOL OF MINES, Golden; James L. Hall: 9 months: \$7,730 COLORADO STATE COLLEGE, Greeley; Albert J. Hendricks, Jr.: 8 months: \$9.830 CONNECTICUT COLLEGE, New London; Alice T. Schafer; 8 months; \$5,230

Charles J. Lyon; 5 months; \$1,320 Charles J. Lyon; 7 months; \$7,500 DEPAUL UNIVERSITY, Chicago, Ill.; Willis B. Caton; 9 months; \$13,920 DOMINICAN COLLEGE OF SAN RAFAEL, San Rafael, Calif.; Mary Augusta; 8 months; \$15,930 DRAKE UNIVERSITY, Des Moines, Iowa: Earle L. Canfield: 9 months: \$15.870 DREW UNIVERSITY, Madison, N.J.; Robert K. Zuck; 5 months; \$4,990 EARLHAM COLLEGE, Richmond, In Roland F. Smith; 9 months; \$1,590 Indiana: Roland F. Smith; 9 months; \$6,020 EAST TEXAS STATE COLLEGE, Commerce; Arthur M. Pullen; 9 months; \$6,820 EASTERN NAZARENE COLLEGE, Wollaston, Mass.; W. Lloyd Taylor; 9 months; \$13,470 EMORY AND HENRY COLLEGE, Emory, Va.: George M. Speed; 9 months; \$5,830 EMORY UNIVERSITY, Atlanta, Ga.; Charles T. Lester; 7 months; \$13,990 FAIRFIELD UNIVERSITY, Fairfield. John A. Barone; 9 months; \$12,220 FAIRLEIGH DICKINSON UNIVERSITY, Rutherford, N.J.; Harold Weinberger; 8 months; \$9,600 Delores E. Keller, Teaneck; 8 months; \$9,720 FENN COLLEGE, Cleveland, Ohio: Walter R. Van Voorhis; 8 months; \$11,060 FLORIDA STATE UNIVERSITY, Tallahassee; J. Stanley Marshall; 15 months; \$12,560 J. Stanley Marshall; 10 months; \$18,310 J. Stanley Marshall; 10 months; \$8,520 FORT HAYS KANSAS STATE COLLEGE, HAYS: W. Toalson; 9 months; \$7,700 FRANKLIN & MARSHALL COLLEGE, Lancaster. Pa.; John H. Moss; 9 months; \$9,620 FRESNO STATE COLLEGE FOUNDATION. Fresno. Calif.; Fred A. Scott; 9 months; \$7,590 GENERAL EXTENSION DIVISION, OREGON STATE SYSTEM OF HIGHER EDUCATION, Portland: J. Richard Byrne, Portland State College; 8 months; \$4,840 GEORGE WASHINGTON UNIVERSITY, Washington, D.C.; Charles R. Naeser; 9 months; GEORGETOWN UNIVERSITY, Washington, D.C. Matthew P. Thekaekara; 9 months; \$10,150 GEORGIA SOUTHERN COLLEGE, Statesboro; Burton J. Bogitsh; 9 months; \$6,540 GLASSBORO STATE COLLEGE, Glassboro, N.J.: Warren G. Roome; 9 months; \$13,680 Murl C. Shawver; 9 months; \$8,390 HAMPTON INSTITUTE, Hampton, Va.; Victor H. Fields; 8 months; \$13,590 HOBART & WILLIAM SMITH Geneva, N.Y.; Robert L. Beinert; 8 months; \$550 Robert L. Beinert; 8 months; \$5,100 HOLY NAMES COLLEGE, Spokane, Wash.; M. Eugene Gautereaux; 7 months; \$12,700 HUMBOLDT STATE COLLEGE FOUNDATION. Arcata, Calif.; Henry S. Tropp; 9 months; \$8,550 IDAHO ACADEMY OF SCIENCE, Boise; J. B. Spulnik, Boise Junior College; 9 months; \$5,160

DARTMOUTH

COLLEGE.

Hanover.

N.H.:

MISSISSIPPI SOUTHERN COLLEGE, Hattles-Merle R. Fisher, Ricks College; 9 months; burg; Virginia Felder; 9 months; \$10,820 \$31,770 ILLINOIS INSTITUTE OF TECHNOLOGY, Chi-MISSISSIPPI STATE UNIVERSITY, State Colcago; Haim Reingold; 9 months; \$78.650 lege; R. D. Boswell, Jr.; 9 months; \$9,620 STATE UNIVERSITY. Missoula: IMMACULATE HEART COLLEGE, Los Angeles, MONTANA James W. Gebhart; \$1,200 Calif.; Eugene T. Spain; 8 months; \$5,570 MOREHEAD STATE COLLEGE, Morehead, Ky.; INCARNATE WORD COLLEGE, San Antonio, Tex.; Sister Joseph Marie; 9 months; William B. Owsley; 9 months; \$7,620 \$11,050 MOUNT MERCY COLLEGE, Pittsburgh, Pa.; Sister M. Michael; 8 months; \$6,060 INTER AMERICAN UNIVERSITY OF PUERTO Rico, San German, Puerto Rico; Ismael William A. Uricchio: 8 months: \$6,760 Velez: 8 months: \$18,290 MUNICIPAL UNIVERSITY OF OMAHA, Omaha, Nebr.; Merle E. Brooks; 9 months; \$27,930 IONA COLLEGE. New Rochelle, N.Y.; George S. Pappas; 9 months; \$8,030 MURRAY STATE COLLEGE FOUNDATION, Murray, Ky.; Alfred M. Wolfson; 9 months; JACKSONVILLE STATE COLLEGE, Jacksonville, Ala.; Newbern W. Bush; 9 months; \$7,850 NEBRASKA WESLEYAN UNIVERSITY, Lincoln; KANSAS STATE COLLEGE of Pittsburg; R. G. Walter R. French, Jr.; 9 months; \$7,840 Smith: 9 months; \$18,500 R. G. Smith; 9 months; \$9,700 NEWARK COLLEGE OF ENGINEERING RESEARCH FOUNDATION, Newark, N.J.; Herbert Bar-KANSAS STATE TEACHERS COLLEGE, Emporia; kan: 9 months: \$9.220 Ted F. Andrews: 9 months; \$25,590 John Bishop; 9 months; \$4,430 KENT STATE UNIVERSITY, Kent. Ohio: Ken-Paul O. Hoffmann; 9 months; \$7,910 neth B. Cummins; 9 months; \$8,390 NEW YORK STATE SOCIETY FOR MEDICAL RE-Galesburg, Ill.; COLLEGE, Paul SEARCH, INC., New York; Albert S. Kuperman, Cornell University Medical College; Shepard: 8 months; \$7,390 COLLEGE, Knoxville, Tenn.; KNOXVILLE 9 months; \$8,450. Robert H. Harvey; 8 months; \$11,880 NEW YORK UNIVERSITY, New York; Morris LAFAYETTE COLLEGE, Easton, Pa.; B. E. Kline; 9 months; \$9,630 Rhoades; 9 months; \$5,780 Elwood J. Winters; 8 months; \$16,250 LAKE FOREST COLLEGE, Lake Forest, Ill.; NORTH CAROLINA COLLEGE at Durham: Wil-John W. Coutts; 9 months; \$7,870 liam H. Robinson; 9 months; \$18,350 LE MOYNE COLLEGE, Memphis, Tenn.; W. W. NORTH DAKOTA STATE UNIVERSITY, Fargo; Gibson; 9 months; \$14,450 Joel W. Broberg; 9 months; \$23,390 LEWIS & CLARK COLLEGE, Portland, Oreg.; NORTHEAST LOUISIANA STATE COLLEGE, Mon-Elvy L. Fredrickson; 9 months; \$5,370 roe; Daniel E. Dupree; 9 months; \$12,070 LONG BEACH STATE COLLEGE FOUNDATION, NORTHEAST MISSOURI STATE TEACHERS COL-Long Beach, Calif.; John J. Baird; 9 LEGE, Kirksville; Dean A. Rosebery; 9 months; \$11,750 months; \$16,310 NORTHERN MICHIGAN COLLEGE, Marquette; LOUISIANA STATE UNIVERSITY, Baton Rouge; Dennis M. Nead, New Orleans; 8 months; W. James Merry; 8 months; \$10,300 \$10,430 NORTHLAND COLLEGE, Ashland, Wis.; Louis LOYOLA UNIVERSITY, New Orleans, La.; F. A. J. Kolonko; 9 months, \$14,640 Benedetto; 9 months; \$8,040 NORTHWESTERN STATE COLLEGE, Alva, Okla.; H. R. Jolley; 9 months; \$9,700 Joe W. Melton; 9 months; \$6,370 John F. Keller; 9 months; \$13,600 NORTHWESTERN UNIVERSITY, Evanston, Ill.; Harrisonburg, COLLEGE, E. H. C. Hildebrandt; 9 months; \$11,520 J. Emmert Ikenberry; 9 months; \$5,610 NORWICH UNIVERSITY, Northfield, Vt.; Ed-MANHATTAN COLLEGE, New York, N.Y.; ward A. Race; 8 months; \$3,700 Arthur B. Kemper; 8 months; \$9,940 Luke V. Titone; 9 months; \$11,670 OHIO STATE UNIVERSITY, Columbus; William R. Riley; 9 months; \$10,370 B. Alfred Welch; 9 months; \$11,500 OHIO UNIVERSITY, Athens; W. T. Fishback; MARQUETTE UNIVERSITY, Milwaukee, Wis.; Arthur G. Barkow; 8 months; \$6,050 8 months; \$5,080 Miriam E. Connellan; 9 months; \$4,110 OREGON STATE UNIVERSITY, Corvallis; Fred W. Decker; 9 months; \$5,460 MARYLHURST COLLEGE, Marylhurst, Oreg.; Albert R. Poole; 9 months; \$3,920 Sister M. Loretta Ann; 8 months; \$5,500 PACE COLLEGE, New York, N.Y.; Edward MCNEESE STATE COLLEGE, Lake Charles, La.; Ritter; 9 months; \$14,150 S. M. Spencer; 9 months; \$9,930 PENNSYLVANIA STATE UNIVERSITY, Univer-MEMPHIS STATE UNIVERSITY, Memphis, sity Park: William H. Powers; 10 months; Tenn.; R. W. Johnson; 9 months; \$5,320 \$41,540 F. B. Schirmer, Jr.; 9 months; \$8,740 PRAIRIE VIEW AGRICULTURAL & MECHANICAL MIDDLE TENNESSEE STATE COLLEGE, Mur-COLLEGE, Prairie View, Tex.; E. E. O'Banfreesboro; J. Eldred Wiser; 9 months; ion; 9 months; \$18,410

MISSISSIPPI COLLEGE, Clinton; Archie H. REED COLLEGE, Portland, Oreg.; Arthur F. Germany; 9 months; \$15,740

MILLERSVILLE STATE COLLEGE, Millersville,

Pa.; William B. McIlwaine; 9 months;

\$6,960

PURDUE UNIVERSITY, Lafayette, Ind.; C. J.

M. Wiles Keller; 9 months; \$41,940

Goodnight; 9 months; \$31,330

STEVENS INSTITUTE OF TECHNOLOGY, Hoboken, N.J.; Robert H. Seavy; 9 months; RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; Daniel W. Snader, Fredonia; 9 months; \$11,470 STONEHILL COLLEGE, North Easton, Mass.; RESEARCH FOUNDATION OF THE UNIVERSITY OF TOLEDO, Toledo, Ohio; Archie N. Solberg; Thomas E. Lockary; 8 months; \$10,120 9 months; \$1,550 TALLADEGA COLLEGE, Talladega, Ala.; Cohen RHODE ISLAND COLLEGE, Providence; Stanley T. Simpson; 7 months; \$2,000 Cohen T. Simpson; 7 months; \$12,030 M. Trail; 9 months; \$7,810 ROCKFORD COLLEGE, Rockford, Ill.; John A. TEACHERS COLLEGE, COLUMBIA UNIVERSITY, New York, N.Y.; Howard F. Fehr; 9 months; Schumaker; 9 months; \$6,300 \$12,400 ROCKHURST COLLEGE, Kansas City, Mo.; Wil-TEMPLE University, Philadelphia, liam C. Doyle; 9 months; \$7,850 Leonard Muldawer; 9 months; \$20,030 RUTGERS, THE STATE UNIVERSITY, New Brunswick, N.J.; Orhan H. Alisbah, Camden; TENNESSEE AGRICULTURAL & INDUSTRIAL STATE UNIVERSITY, Nashville; William N. 9 months; \$9,400 Westervelt Griffin; 9 months; \$5,850 Jackson; 9 months; \$18,040 TEXAS WOMAN'S UNIVERSITY, Denton, Tex.; SACRAMENTO STATE COLLEGE FOUNDATION, Harold T. Baker; 9 months; \$6,060 Sacramento, Calif.; Stanley P. Hughart; 9 Harlan C. Miller; 9 months; \$6,680 months; \$20,810 TRENTON STATE COLLEGE, Trenton, N.J.; ST. AUGUSTINE'S COLLEGE, Raleigh, N.C.; Victor L. Crowell; 10 months; \$9,240 Jeffery Gipson; 8 months; \$5,440 UNION COLLEGE & UNIVERSITY, Schenec-ST. CLOUD STATE COLLEGE, St. Cloud, Minn.; tady, N.Y.; C. W. Graves; 9 months; \$17,400 Harold Hopkins; 9 months; \$5,420 University of Akron, Akron, Ohio; Mabel ST. FRANCIS COLLEGE, Loretto, Pa.; Law-W. Riedinger; 9 months; \$1.010 rence V. Pion; 8 months; \$5,080 Mabel M. Riedinger; 9 months; \$8,600 ST. JOSEPH'S COLLEGE, West Hartford, UNIVERSITY OF ARIZONA, Tucson: Robert W. Conn.; Maria Clare Markham; 9 months; Hoshaw: 9 months: \$11,340 \$15,280 John W. Robson; 9 months; \$3,140 ST. LOUIS UNIVERSITY, St. Louis, Mo.; John Arthur H. Steinbrenner; 9 months; \$7,900 J. Andrews; 9 months; \$7,650 UNIVERSITY OF ARKANSAS, Fayetteville; William R. Orton; 9 months; \$32,850 ST. MARTIN'S COLLEGE, Olympia, Wash.; John Raymond; 8 months; \$6,810 University of Buffalo, Buffalo, N.Y.; Edith R. Schneckenburger; 9 months; \$6,000 ST. PETER'S COLLEGE, Jersey City, N.J.; Stephen S. Winter; 9 months; \$17,170 Perry Y. Jackson; 9 months; \$7,610 University of California, Berkeley; Clif-Francis A. Varrichio; 9 months; \$8,330 ford Bell, Los Angeles; 8 months; \$32,210 SAN DIEGO STATE COLLEGE FOUNDATION, San UNIVERSITY OF CHATTANOOGA, Chattanooga, Diego, Calif.; Donald I. Eidemiller; 10 Tenn.; Kenneth A. Fry; 9 months; \$13,630 months; \$12,200 Robert L. Wilson; 9 months; \$7,010 Margaret F. Willerding; 9 months: I. A. Barnett; 9 months; \$19,030 SAN JOSE STATE COLLEGE FOUNDATION, San Jose, Calif.; Robert E. Arnal; 9 months; W. Jones; 9 months; \$10,030 \$6,260 Max Kramer; 9 months; \$18,530 J. Blick; 9 months; \$16,630 Laurence E. Wilson; 9 months; \$12,650 SARAH LAWRENCE COLLEGE, Bronxville, N.Y.; Groot; 9 months; \$5,870 Edward J. Cogan; 8 months; \$23,730 SHORTER COLLEGE, Rome, Ga.; James S. Lee; neth P. Kidd; 10 months; \$29,070 9 months; \$13,510 G. Ray Noggle; 10 months; \$29,170 SOUTH CAROLINA STATE COLLEGE, Orangeburg; George W. Hunter; 9 months; \$30,480 Koelsche; 9 months; \$16,130 SOUTHEASTERN STATE COLLEGE, Durant, Okla.; Leslie A. Dwight; 9 months; \$3,780 Smith; 6 months; \$8,440 Ernest Sturch, Jr.; 9 months; \$5,600 SOUTHERN METHODIST UNIVERSITY, Dallas. M. Balfour; 9 months; \$9,060 Tex.; Joe P. Harris, Jr.; 9 months; \$8,170 SOUTHWESTERN AT MEMPHIS, Memphis, W. H. Spragens; 9 months; \$5,420 Tenn.; Jack U. Russell; 9 months; \$8,540 Bruce B. Vance; 9 months; \$5,740 Arlo I. Smith; 9 months; \$7,140

University of Cincinnati, Cincinnati, Ohio; University of Colorado, Boulder; Burton University of Connecticut, Storrs; David University of Delaware, Newark; J. J. UNIVERSITY OF FLORIDA, Gainesville; Ken-University of Georgia, Athens; Charles L. University of Hawaii, Honolulu; Jimmie B. University of Kansas, Lawrence; William University of Louisville, Louisville, Ky.; University of Maryland, College Park; STATE COLLEGE AT SALEM, Salem, Mass.; Robert Detenbeck; 9 months; \$20,770 Thomas I. Ryan; 8 months; \$11,960 UNIVERSITY OF MIAMI, Coral Gables, Fla.; STATE UNIVERSITY OF IOWA, IOWA CITY; Andrew F. Sobczyk; 9 months; \$25,250 Robert E. Yager; 8 months; \$16,090 University of Michigan, Ann Arbor; Charles Brumfiel; 9 months; \$15,440 STATE UNIVERSITY OF SOUTH DAKOTA, Ver-UNIVERSITY OF NEVADA, Reno; E. M. Beesmillion; Theodore L. Reid; 9 months; ley: 10 months: \$19,360 \$27.510 University of New Mexico, Albuquerque; STETSON UNIVERSITY, De Land, Fla.; Gene W. Medlin; 9 months; \$2,980 Merle Mitchell; 9 months; \$5,360 238

University of North Carolina, Chapel Hill; William A. White; 9 months; \$9,050 Hollis J. Rogers, Greensboro: 9 months: \$22,820

UNIVERSITY OF NORTH DAKOTA, Grand Forks; Paul B. Kannowski; 9 months; \$14,310 H. V. Park, Raleigh; 9 months; \$7,520

UNIVERSITY OF OKLAHOMA, Norman; Richard V. Andree; 9 months; \$31,630

Harold V. Huneke; 10 months; \$9,780 University of Oregon, Eugene; A. F. Moursund: 8 months; \$6,450

University of Pennsylvania, Philadelphia; J. F. Hazel; 10 months; \$12,980

Pittsburgh, UNIVERSITY OF PITTSBURGH, Pa. : Peter Gray ; 8 months ; \$7,780

University of Pubrio Rico, Mayaguez; Virgilio Biaggi, Jr.; 9 months; \$11,790 Augusto Bobonis; 9 months; \$14,970 Harold Heatwole; 9 months; \$9,930

J. C. Knipp; 8 months; \$9,060 UNIVERSITY OF REDLANDS, Redlands, Calif.; Paul R. Gleason; 8 months; \$11,270

UNIVERSITY OF ROCHESTER, Rochester, N.Y.; John J. Montean; 9 months; \$32.100

UNIVERSITY OF SAN FRANCISCO, San Francisco, Calif.: Edward J. Farrell; 10 months; \$10,070

UNIVERSITY OF SCRANTON, Scranton, Pa.; Joseph A. Rock; 9 months; \$18,210

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS Angeles; John W. Reith; 10 months; \$2,360 Paul A. White; 9 months; \$21,960

UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette; James R. Oliver; 9 months; \$18,100

James R. Oliver; 9 months; \$12,650 James R. Oliver: 9 months; \$12,960

UNIVERSITY OF TEXAS, Austin, E. J. Knapp, El Paso; 9 months; \$5,560 UNIVERSITY OF UTAH, Salt Lake City; James H. Wolfe; 9 months; \$7,650

UNIVERSITY OF VIRGINIA, Charlottesville; James W. Cole, Jr.; 9 months; \$21,100 James W. Cole, Jr.; 9 months; \$6,980

William C. Lowry; 9 months; \$11,100 UNIVERSITY OF WASHINGTON, Seattle; Roy Dubisch; 9 months; \$8,510

Arthur D. Welander: \$750

University of Wyoming, Laramie; W. Norman Smith; 9 months; \$7,510

UTAH STATE UNIVERSITY, Logan; McRay Cloward, Cedar City; 8 months; \$8,660 Marden Broadbent, Provo; 8 months;

\$6,760

VILLANOVA UNIVERSITY, Villanova, Pa.; J. Bernard Hubbert; 9 months; \$14,270 VIRGINIA STATE COLLEGE, Petersburg; Richard H. Dunn; 9 months; \$7,790

Richard H. Dunn; 9 months; \$18,000

WAKE FOREST COLLEGE, Winston-Salem, N.C.; Ben M. Seelbinder; 9 months; \$6,880 WAYNE STATE UNIVERSITY, Detroit, Mich.; William V. Mayer; 8 months; \$9,080

WEST CHESTER STATE COLLEGE, West Chester. Pa.: Albert E. Filano; 10 months; \$6,750

WEST VIRGINIA UNIVERSITY, Morgantown; I. Dee Peters; 9 months; \$34,470

WESTERN MICHIGAN UNIVERSITY, Kalamazoo; George G. Mallinson; 9 months; \$12,800

WILLIAM JEWELL COLLEGE, Liberty, Wallace A. Hilton; 9 months; \$11,530

XAVIER UNIVERSITY, New Orleans, La.; Sister Miriam Francis; 9 months; \$7,960 Sister M. Veronica; 9 months: \$7,390

YESHIVA UNIVERSITY, New York, N.Y.; Abe Gelbart; 9 months; \$82,750

William Zlot; 9 months; \$5,640

University, Youngstown, Ohio: Bernard J. Yozwiak; 9 months; \$5,820

### PUBLIC UNDERSTANDING OF SCIENCE

AMERICAN INSTITUTE OF PHYSICS, New York, N.Y.; Elmer Hutchisson; Seminars for Science Writers; 14 months; \$15,530

Elmer Hutchisson; Seminars for Science

Writers; 1 month; \$34,140

CITY COLLEGE, New York, N.Y.; Mina Rees; Planning of a New Educational Television Series; 1 year; \$10,000

COUNCIL FOR THE ADVANCEMENT OF SCIENCE WRITING, INC., New York, N.Y.; Pierre C. Fraley; A Science Seminar for Magazine Editors; 3 days; \$5,605

EDUCATIONAL TESTING SERVICE, Princeton, N.J.; John S. Hollister; Nationwide Educational Television Science Film Program; 2 years; \$30,300

NEW YORK UNIVERSITY, New York; Hillier Krieghbaum; Program to Train Science News Reporters; 2 weeks; \$14,740

STATE OF WISCONSIN BOARD OF REGENTS OF STATE COLLEGES, Madison; Harry F. Bangsberg; Science Seminar for Mass Communications Personnel; 4 days; \$3,990

TULANE UNIVERSITY, New Orleans, La.; Quentin Ault; Science News Seminar for Selected Southern Newspaper Editors; 5 months: \$7,237

UNIVERSITY OF CALIFORNIA, Berkeley; A. Hunter Dupree; History of Science in the Federal Government, 1940-1960; 3 years; \$177,560

UNIVERSITY OF MICHIGAN, Ann Arbor; Charles W. Wixom; Conference on Science in the Press; 2 days; \$17,990

#### PARTICIPATION FOR COLLEGE RESEARCH TEACHERS PROGRAM

BRANDEIS UNIVERSITY, Waltham, M. Myron Rosenblum; 12 weeks; \$11,110 Mass.;

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; J. Reid Shelton; 11 months; \$18,750 FLORIDA STATE UNIVERSITY, Tallahassee

Barron B. Scarborough; 11 months; \$21,110 Leland Shanor; 8 weeks; \$14,000

HOWARD UNIVERSITY, Washington, Joseph B. Morris; 10 weeks; \$16,960

INDIANA UNIVERSITY, Bloomington; Harry G. Day; 8 weeks; \$10,600

John B. Patton; 8 weeks; \$6,500

IOWA STATE UNIVERSITY, Ames; Paul F. Romberg; 9 weeks; \$10,830

KANSAS STATE UNIVERSITY, Manhattan; Jack L. Lambert; 9 months; \$3,620

LOUISIANA STATE UNIVERSITY, Baton Rouge; Robert V. Nauman: 10 weeks; \$24,355

Vincent E. Parker; 9 weeks; \$15,310

NEW MEXICO HIGHLANDS UNIVERSITY, Las | University of Tennessee, Knoxville; Wil-Vegas: James P. Zietlow 1 year: \$30,530 liam E. Bull; 11 weeks; \$25,100 UNIVERSITY OF VIRGINIA, Charlottesville; Bart Van't Riet; 1 year; \$13,410 NORTH DAKOTA STATE UNIVERSITY, Fargo; J. A. Callenbach; 11 months; \$10,240 UNIVERSITY OF WISCONSIN, Madison; Robert W. Finley: 11 months; \$17,785 OHIO STATE UNIVERSITY, Columbus; F. E. Deatherage; 1 year; \$17,480 UTAH STATE UNIVERSITY, Logan; H. B. Pe-OKLAHOMA STATE UNIVERSITY RESEARCH FOUNDATION, Stillwater; Marvin T. Edmison; 10 weeks; \$7,745 terson: 12 weeks: \$14,960 VIRGINIA INSTITUTE OF MARINE SCIENCE. Glenn W. Todd; 1 year; \$13,320 Gloucester Point; Robert S. Bailey; 1 year; OREGON STATE UNIVERSITY, Corvallis; W. H. \$33,180 Slabaugh; 8 weeks; \$29,770 WESTERN RESERVE UNIVERSITY, Cleveland, PENNSYLVANIA STATE UNIVERSITY, University Ohio: Gerald E. Tauber: 1 year: \$11,020 Park; William M. Lepley; 10 weeks; \$14,430 M. J. Montjar; 9 weeks; \$9,900 RESEARCH PARTICIPATION FOR HIGH SCHOOL TEACHERS PROGRAM PURDUE UNIVERSITY, Lafayette, Ind.; Kirk L. Athow; 12 weeks; \$10,470 BOYCE THOMPSON INSTITUTE FOR PLANT RE-M. X. Zarrow; 1 year; \$23,980 SEARCH, INC., Yonkers, N.Y.; Lawrence P. Miller; 8 weeks; \$12,430 ROSWELL PARK MEMORIAL INSTITUTE, Buffalo. N.Y.; Edwin A. Mirand; 13 weeks; CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; B. R. Teare, Jr.; 8 weeks; \$17,530 \$27,015 STANFORD UNIVERSITY, Stanford, Calif.; Willis W. Harman : 12 weeks : \$26,330 CITY COLLEGE, New York, N.Y.; Chester B. STATE UNIVERSITY OF SOUTH DAKOTA, Ver-Kremer; 11 months; \$17,950 million; George P. Scott; 11 months; \$4,210 CLARK UNIVERSITY, Worcester, Mass.; Roy SYRACUSE UNIVERSITY, Syracuse, N.Y.; James S. Anderson; 1 year; \$4,720 CLARKSON COLLEGE OF TECHNOLOGY, Pots-A. Luker; 12 weeks; \$8,330 dam, N.Y.; Theodore Renzema; 9 weeks; TUFTS UNIVERSITY, Medford, Mass.; M. Kent \$15,080 Wilson; 8 weeks; \$14,940 COLLEGE OF WOOSTER, Wooster, Ohio; John UNIVERSITY OF BUFFALO, Buffalo, N.Y.; D. Reinheimer: 11 months: \$8,140 Howard Tieckelmann; \$2,310 COLORADO STATE UNIVERSITY RESEARCH UNIVERSITY OF CALIFORNIA, Berkeley; Rich-FOUNDATION, Fort Collins; Merle G. Payne; ard Fulrath; 1 year; \$23,135 1 year; \$18,200 UNIVERSITY OF COLORADO, Boulder; Albert A. CORNELL UNIVERSITY, Ithaca, N.Y.; Phillip Bartlett; 10 weeks; \$17,040 G. Johnson; 11 months; \$33,120 Bert M. Tolbert; 10 weeks, \$23,250 Hanover, DARTMOUTH COLLEGE. University of Florida, Gainesville; Stan-Thomas E. Kurtz; 8 weeks; \$11,060 ley S. Ballard; 1 year; \$11,300 Wallace S. Brey, Jr.; 1 year; \$15,460 GEORGE WASHINGTON CARVER FOUNDATION, TUSKEGEE INSTITUTE, Ala.; Clarence T. UNIVERSITY OF GEORGIA, Athens; William J. Mason; 8 weeks; \$9,780 Payne; 10 weeks; \$9,890 GEORGE WASHINGTON UNIVERSITY, Washing-University of Illinois, Urbana; C. Ladd ton, D.C.; R. B. Stevens; 1 year; \$3,330 Prosser; 8 weeks; \$14,300 University of Kansas, Lawrence; C. A. Vanderwerf; 11 weeks; \$30,740 ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Sidney I. Miller; 1 year; \$15,580 INDIANA UNIVERSITY, Bloomington; L. S. UNIVERSITY OF MARYLAND, College Park; John S. Toll; 10 weeks; \$22,590 McClung; 11 months; \$8,960 IOWA STATE UNIVERSITY, Ames; Paul Rom-UNIVERSITY OF MASSACHUSETTS, Amherst; berg: 9 weeks: \$24.740 Edward L. Davis; 11 months; \$6,875 KANSAS STATE TEACHERS COLLEGE, Emporia; UNIVERSITY OF MISSISSIPPI, University; Ted F. Andrews; 1 year; \$21,450 Russell W. Maatman; 1 year; \$16,980 MONTANA STATE UNIVERSITY, Missoula; Paul UNIVERSITY OF NEBRASKA, Lincoln; John W. H. Baldwin; 8 weeks; \$7,060 Weymouth; 1 year; \$17,150 NEW MEXICO HIGHLANDS UNIVERSITY, Las UNIVERSITY OF NORTH CAROLINA, Chapel Vegas; E. Gerald Meyer; 1 year; \$16,800 Hill: Homer C. Folks, Raleigh; 1 year; NORTH DAKOTA STATE UNIVERSITY, Fargo; \$31,160 J. A. Callenbach; 11 months; \$17,110 T. Ewald Maki, Raleigh; 10 weeks; \$4,000 NORTH TEXAS STATE UNIVERSITY, Denton; Robert C. Sherman; 1 year; \$13,490 OF NORTH DAKOTA, Grand LINIVERSITY PRAIRIE VIEW AGRICULTURAL AND MECHAN-Forks; H. E. Ederstrom; 8 weeks; \$2,810 ICAL COLLEGE, Prairie View, Tex.; E. E. University of Oklahoma, Norman; Rich-O'Banion; 1 year; \$12,340 ard V. Andree; 1 year; \$51,500 Alfred J. Weinheimer; 11 months; RENSSELAER POLYTECHNIC INSTITUTE, Troy, \$21,330 N.Y.; Robert L. Strong; 8 weeks; \$20,130 RESEARCH FOUNDATION OF STATE UNIVERSITY UNIVERSITY OF ROCHESTER, Rochester, N.Y.;

of New York, Albany; Edwin C. Jahn, Syra-

ST. JOHN'S UNIVERSITY, Jamaica, N.Y.; Paul

cuse: 10 weeks: \$8,050

T. Medici; 8 weeks; \$17,810

\$15,280

Stanley R. Glasser; 8 weeks; \$16,280

University of Southern California, Los

Angeles; Walter E. Martin; 10 weeks;

STANFORD UNIVERSITY, Stanford, Calif.; O. Cutler Shepard: 11 months: \$10.820

STATE UNIVERSITY OF SOUTH DAKOTA. million; George P. Scott; 11 months; \$18,720 TENNESSEE AGRICULTURAL AND INDUSTRIAL STATE UNIVERSITY, Nashville; Samuel von Winbush; 8 weeks; \$7,060

U.S. NAVY ELECTRONICS LABORATORY, San Diego, Calif.; Robert W. Young; 62 weeks; \$8,500

University of Arizona, Tucson; Jefferson C. Davis: 11 months: \$15.360

University of Buffalo, Buffalo, N.Y.; How-Tieckelmann; 11 months; \$11,430

UNIVERSITY OF CALIFORNIA, Berkeley; Fred

E. Dickinson; 11 months; \$39,150 Robert L. Thornton; 10 weeks; \$47,880 Richard A. Bernhard, Davis; 8 weeks; \$9,660

University of Delaware, Newark: James C. Kakavas; 8 weeks; \$11,630

University of Georgia, Athens; Robert A. McRorie; 10 weeks; \$22,070

UNIVERSITY OF HAWAII, Honolulu; Harry Zeitlin; 10 weeks; \$10,870

University of Massachusetts, Amherst;

Edward L. Davis; 11 months; \$5,720 UNIVERSITY OF MISSISSIPPI, University; Barton Milligan; 1 year; \$11,440

UNIVERSITY OF NORTH CAROLINA, Chapel Hill; Robert M. Pinkerton, Raleigh; 1 year; \$7.710

UNIVERSITY OF NORTH DAKOTA, Grand Forks, Francis A. Jacobs; 8 weeks; \$3,920

University of Oklahoma, Norman; Horace Hoffman; 11 months; \$12,230

Carl D. Riggs; 11 months; \$14,760

University of the Pacific, Stockton, Calif.; Joel W. Hedgpeth; Dillon Beach; 1 year; \$13,420

UNIVERSITY OF RHODE ISLAND, Kingston; Eugene C. Winslow; 8 weeks; \$6,320

UNIVERSITY OF ROCHESTER, Rochester, N.Y.; John J. Montean; 11 months; \$23,350

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS Angeles; Charles S. Copeland; 4 months; \$2,780

UNIVERSITY OF VERMONT, Burlington; Howard M. Smith, Jr.; 11 months; \$11,760

UNIVERSITY OF VIRGINIA, Charlottesville; Jacques Rappaport; 8 weeks; \$8,020

University of Wisconsin, Madison; Donald H. Bucklin; 11 months; \$48,970

WAYNE STATE UNIVERSITY, Detroit, Mich.; George H. Schenk; 8 weeks; \$10,320

# SCIENTIFIC MANPOWER STUDIES

AMERICAN UNIVERSITY, Washington, D.C.; Ernest S. Griffith; Current Role of the Sino-Soviet Bloc in the Development of the Soien-tific and Engineering Manpower Resources of Other Countries; 2 months; \$1,725

ENGINEERS JOINT COUNCIL, New York, N.Y.; Carl Frey; Analysis of 1962 Salary and Other Professional Earnings of Engineering Faculty Members; 7 months; \$10,870

FEDERATION OF AMERICAN SOCIETIES FOR Ex-PERIMENTAL BIOLOGY, Washington, D.C.; Milton O. Lee; Tabulation and Analysis of Ph. D. Dissertations in the Basic Medical Sciences; 8 months; \$9,258

MIDDLE EAST INSTITUTE, Washington, D.C.; Fahim I. Qubain; The Employment and Training of Scientists and Engineers in the Middle East; 1 year; \$17,595

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL. Washington. D.C.: M. H. Trytten: Continuation of Revision of Study on Soviet Professional Manpower; 3 months; \$1.584

NATIONAL MERIT SCHOLARSHIP CORPORATION. Evanston, Ill.; John L. Holland; Study of Institutional Characteristics Related to College Productivity; 1 year; \$25,185

NATIONAL OPINION RESEARCH CENTER, Chicago, Ill.; Peter H. Rossi; Development of A Study Plan for Post Enumeration Census Study: \$3,538

NATIONAL SCIENCE TEACHERS ASSOCIATION, Washington, D.C.; Robert H. Carleton; 1961-62 Registry of High School Science and Mathematics Teachers; 1 year; \$36,800 Robert H. Carleton; 1962-63 Registry of

High School Science and Mathematics Teachers; 1 year; \$42,550

SETON HALL UNIVERSITY, South Orange, N.J.; John B. Tsu; Employment and Utilization of Communist China's Scientists and Engineers, 1950-1962; 7 months; \$7,000

U.S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS, Washington, D.C.; Richard M. Scammon; Post-Censual Survey of Professional and Technical Manpower; 18 months; \$290,000

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, OFFICE OF EDUCATION, Washington, D.C.; E. Glenn Featherston; 1960-61 Survey of Federal Funds for Science Education; 9 months; \$13,405
Ralph M. Flynt; Survey of Offerings and

Nonpublic Enrollments in Secondary Schools; 18 months; \$19,710

Francis A. J. Ianni; Study of the 1961 Graduating Classes of American Undergraduate Colleges; 6 months; \$5,000

Virgil Walker; Sources of Financial Sup-ert of Graduate Students; 6 months; port of \$22,224

U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, Washington, D.C.; Ewan Clague; Development of Long-Range Estimates of Demand for Scientific and Technical Personnel; 1 year; \$49,700

Ewan Clague; A Pilot Study of the Quality of Resources to Surroys of Scientific and

ity of Responses to Surveys of Scientific and Technical Personnel in Industry; 7 months; \$16,000

UNIVERSITY OF MARYLAND, College Park; Dudley Dillard; Evaluation of Utilization of Women as a Manpower Resource in the Soviet Union; 2 months; \$1,725

University of Wisconsin, Madison; Gerald G. Somers; The Labor Market Behavior of Scientists and Engineers in Jet and Missiles Production: 1 year; \$15,295

# SEMINAR ON MODERN SCIENCE AND MATH-EMATICS IN SECONDARY SCHOOLS, NIGERIA

EARLHAM COLLEGE, Richmond, Ind.; Laurence E. Strong; 4 months; \$8,565

EDUCATIONAL SERVICES INC., Watertown, Haber-Schaim; 4 months; Mass.: Uri \$11,420

STANFORD UNIVERSITY, Stanford, Calif.; Edward G. Begle; 4 months; \$9,000

### SPECIAL CONFERENCES AND SYMPOSIA

EDUCATIONAL SERVICES INC., Watertown, Mass.; Jerrold R. Zacharias; One-Week Training Conference for the Summer Institute Staffs Dealing with the Physics Course Prepared by the Physical Science Study Committee; 1 week; \$14,700

# SPECIAL FIELD INSTITUTES

UNIVERSITY RESEARCH COLORADO STATE FOUNDATION, Fort Collins; Herbert Riehl; The Atmosphere and the Water Cycle; 11 weeks; \$9,520

HOWARD UNIVERSITY, Washington, D.C.; Evon Z. Vogt; Field Institute in Anthropology; 3 months; \$15,075

UNIVERSITY OF CALIFORNIA, Berkeley; Arno P. Schniewind; Conference on the Mechanical Behavior of Wood; 6 days; \$15,485

University of Kansas, Lawrence; Charles D. Michener; Entomological Field Course in Mexico and Central America; 3 months; \$3,100

UNIVERSITY OF MICHIGAN, Ann Arbor; Paul F. Zweifel; Conference in Neutron Physics; 7 days; \$8,990

VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg; James B. Eades, Jr.; A Conference on Lunar Exploration; 5 days; \$36,995

WASHINGTON STATE UNIVERSITY, Pullman; William W. Elmendorf; Field School in Ethnography; 4 months; \$2,045

### STATE ACADEMIES OF SCIENCE PROGRAM

ACADEMY OF SCIENCE OF ST. LOUIS, St. Louis, Mo.; Donn P. Brazier; 20 months; \$13,545 ALABAMA ACADEMY OF SCIENCE, Montevallo; Ruric E. Wheeler, Howard College; 20 months; \$8,200

ACADEMY OF SCIENCE, Phoenix; ARIZONA Chester R. Leathers, Arizona State University; 18 months; \$17,580

ARKANSAS ACADEMY OF SCIENCE, Russellville; John W. Keesee, University of Arkansas; 17 months; \$6,810

CHICAGO ACADEMY OF SCIENCES, Chicago, Ill.; William J. Beecher; 17 months; \$10,315

COLORADO-WYOMING ACADEMY OF SCIENCE, Colorado Springs, Colo.; Richard G. Beidleman, Colorado College; 17 months; \$3,935 FLORIDA ACADEMY OF SCIENCES, Park; Paul A. Vestal, Rollins College; 16

months; \$14,000 FRANKLIN INSTITUTE, Philadelphia, Pa.; Robert W. Neathery; 15 months; \$3,795 GEORGIA ACADEMY OF SCIENCE, Chamblee;

William H. Jones, Emory University; 11 months; \$8,510

HAWAIIAN ACADEMY OF SCIENCE, Honolulu; Albert B. Carr, University of Hawaii; 18 months; \$4,220

Paul C. Ekern, University of Hawaii; 18 months; \$2,900

Wallace G. Sanford, University of Hawaii: 18 months; \$19,205

IDAHO ACADEMY OF SCIENCE, Boise; Verl G. Garrard, University of Idaho; 18 months; \$14,205

INDIANA ACADEMY OF SCIENCE, Notre Dame; Howard H. Michaud, Purdue University; 18 months; \$17,150

IOWA ACADEMY OF SCIENCE, Inc., Iowa City; T. R. Porter, State University of Iowa; 18 months; \$21,040

KANSAS ACADEMY OF SCIENCE, Hays; John Breukelman, Kansas State Teachers College; 18 months; \$7,800

Margaret B. Parker, Kansas State College; 19 months; \$22,160

LOUISIANA STATE UNIVERSITY, Baton Rouge; Harry J. Bennett; 17 months; \$20,255 Harry J. Bennett; 17 months; \$6,010

MARYLAND ACADEMY OF SCIENCES, Baltimore;

Nigel O'C. Wolff; 1 year; \$12,980 Nigel O'C. Wolff; 1 year; \$2,630 Nigel O'C. Wolff; 18 months; \$2,740

MICHIGAN ACADEMY OF SCIENCE, ARTS, AND LETTERS, East Lansing; Wayne Taylor, Michigan State University; 18 months; \$20,900

MINNESOTA ACADEMY OF SCIENCE, Austin; Walter O. Lundberg, University of Minnesota; 20 months; \$8,050

Walter O. Lundberg, University of Minnesota; 20 months; \$6,325

MISSISSIPPI ACADEMY OF SCIENCES, Inc., State College; Clyde Q. Sheely, Mississippi State University; 18 months; \$35,455

MONTANA ACADEMY OF SCIENCES, Missoula; John P. Robinson; 18 months; \$8,755

MUSEUM OF ART, SCIENCE, AND INDUSTRY, Bridgeport, Conn.; Earle W. Newton; 18 months; \$9,845

NEBRASKA ACADEMY OF SCIENCES, Omaha; James A. Rutledge, University of Nebraska; 18 months; \$13,920

NEW MEXICO ACADEMY OF SCIENCE, Albuquerque; J. D. Hopperton, New Mexico Institute of Mining and Technology; 21 months; \$9,785

NORTH CAROLINA ACADEMY OF SCIENCE, Durham; Herbert E. Speece, North Carolina State College; 20 months; \$10,975

NORTHERN NEW ENGLAND ACADEMY OF SCI-ENCE, Durham, N.H.; Allen L. King, Dartmouth College; 19 months; \$13,500

Howard I. Wagner, State Department of Education; 20 months; \$4,000

OHIO ACADEMY OF SCIENCE, Columbus; Gerald Acker, Bowling Green State University; 20 months; \$7,735

William A. Manuel, Ohio Wesleyan University; 18 months; \$23,000

OKLAHOMA ACADEMY OF SCIENCE, Stillwater; Robert C. Fite, Oklahoma State University; 20 months: \$7.870

J. Teague Self, University of Oklahoma; 20 months; \$21,310

OREGON ACADEMY OF SCIENCE, Portland; John T. Van Bruggen, University of Oregon Medical School; 14 months; \$7,880

PENNSYLVANIA ACADEMY OF SCIENCE. Easton; Charles L. Bikle, Milton Hershey School; 15 months; \$9,005

SOUTH DAKOTA ACADEMY OF SCIENCE, Vermillion; T. Van Bruggen, State University of South Dakota; 18 months; \$5,810

T. Van Bruggen, State University of South Dakota; 18 months; \$1,935

T. Van Bruggen, State University South Dakota; 18 months; \$9,780

T. Van Bruggen, State University of South Dakota; 18 months; \$3,740

TENNESSEE ACADEMY OF SCIENCE, Nashville; Myron S. McCay, University of Chattanooga; 19 months; \$13,325

Albert L. Myers, Carson-Newman College; 18 months; \$3,570

W. Roger Rusk, University of Tennessee; 18 months; \$12,100

TEXAS ACADEMY OF SCIENCE, Galveston; Addison E. Lee, University of Texas; 18 months; \$19,365

Charles LaMotte, Agricultural and Mechanical College of Texas; 20 months; \$10,610

UNIVERSITY OF PUERTO RICO, Rio Piedras; Herminio Lugo; 18 months; \$25,070

UTAH ACADEMY OF SCIENCES, ARTS, AND LETTERS, Logan; Orson Whitney Young, Weber College; 18 months; \$14,720

WASHINGTON ACADEMY OF SCIENCES, Washington, D.C.; John K. Taylor, National Bureau of Standards; 1 year; \$5,550

John K. Taylor, National Bureau of Standards; 1 year; \$2,500

John K. Taylor, National Bureau of Standards; 18 months; \$10,550

WEST VIRGINIA ACADEMY OF SCIENCE, Morgantown; Arthur B. Gould, West Virginia Wesleyan College; 17 months; \$5,850

WISCONSIN ACADEMY OF SCIENCES, ARTS, AND LETTERS, Beloit; Jack R. Arndt, University of Wisconsin; 18 months; \$7,175

# SUMMER CONFERENCE FOR COLLEGE TEACHERS

AMERICAN UNIVERSITY, Washington, D.C.; Matthew F. Norton; 14 days; \$16,600

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; Gordon M. Barrow; 19 days; \$15,200 COLORADO SCHOOL OF MINES, Golden; Robert J. Weimer; 27 days; \$24,900

COLORADO STATE UNIVERSITY RESEARCH FOUNDATION, Fort Collins; Ferdinand Baer; 20 days; \$16,900

Donald R. Wood; 19 days; \$14,100

DARTMOUTH COLLEGE. Hanover, N.H.; Daniel Rosenthal, University of California; 10 days; \$11,900

FAIRMONT STATE COLLEGE, Fairmont, W. Va.; John W. Hogarty; 25 days; \$19,000

GENERAL EXTENSION DIVISION, OREGON SYSTEM OF HIGHER EDUCATION, Portland; Robert W. Rempfer, Portland State College; 20 days; \$11,400

GEORGETOWN UNIVERSITY, Washington, D.C.; Matthew P. Thekaekara; 24 days; \$21,000 INSTITUTE OF PAPER CHEMISTRY, Appleton, Wis.; Elwood O. Dillingham; 12 days; \$14,100

LEHIGH UNIVERSITY, Bethlehem, Pa.; Everett Pitcher; 19 days; \$18,000

MARQUETTE UNIVERSITY., Milwaukee, Wis., John E. Kelley; 20 days; \$12,400

MICHIGAN COLLEGE OF MINING AND TECHNOLOGY, Houghton; James M. Neilson; 15 days; \$16,900

MONTCLAIR STATE COLLEGE, Upper Montclair, N.J.; Anthony J. Pettofrezzo; 12 days; \$11.000

OHIO STATE UNIVERSITY, Columbus; Daryle H. Busch; 12 days; \$13.200

OKLAHOMA STATE UNIVERSITY, Stillwater; L. Wayne Johnson; 14 days; \$16,800

PENNSYLVANIA STATE UNIVERSITY, University Park; William H. Powers; 27 days; \$7.100

PRINCETON UNIVERSITY, Princeton, N.J.; A. J. Maruca; 19 days; \$17,900

RUTGERS, THE STATE UNIVERSITY, New Brunswick, N.J.; Richard F. Gabriel; 20 days; \$18,200

TUFTS UNIVERSITY, Medford, Mass.; M. Kent Wilson; 13 days; \$13,800

University of Arizona, Tucson; Donald L. Webb; 19 days; \$15,300

UNIVERSITY OF CALIFORNIA, Berkeley; Clifford Bell, Los Angeles; 26 days; \$18,900 Daniel Rosenthal, Los Angeles; 10 days;

\$11,200
University of Florida, Gainesville; Wallace

University of Florida, Gainesville; Wallace S. Brey, Jr.; 12 days; \$13,680

UNIVERSITY OF LOUISVILLE, LOUISVILLE, Ky.; Daniel F. Jackson; 21 days; \$19,100 UNIVERSITY OF MIAMI, Coral Gables, Fla.;

E. F. Low, Jr.; 26 days; \$14,800 UNIVERSITY OF MICHIGAN, Ann Arbor; Phil-

lip S. Jones; 26 days; \$21,600 UNIVERSITY OF NORTH CAROLINA, Chapel

Hill; C. Ritchie Bell; 19 days; \$14,700
University of Southern California, Los

Angeles; Robert D. Vold; 16 days; \$15,200 University of Southwestern Louisiana, Lafayette; James R. Oliver; 27 days; \$17,400

UNIVERSITY OF UTAH, Salt Lake City; Eugene E. Kohlbecker; 26 days; \$19,200

VANDERBILT UNIVERSITY, Nashville, Tenn.; B. F. Bryant and James R. Wesson; 26 days; \$17,300

WASHINGTON STATE UNIVERSITY, Pullman; Sidney G. Hacker; 26 days; \$19,800

Charles Gardner Shaw; 12 days; \$14,800 WAYNE STATE UNIVERSITY, Detroit, Mich.; Willard H. Parsons; 20 days; \$20,400

# SUMMER INSTITUTES FOR COLLEGE TEACHERS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; J. H. Caddess; 15 weeks; \$51,300

Robert G. Cochran; 6 weeks; \$18,100

AMERICAN University, Washington, D.C.; Leo Schubert; 6 weeks; \$49,250

ARIZONA STATE UNIVERSITY, Tempe; Gordon L. Bender; 6 weeks; \$40,500 AUBURN UNIVERSITY, Auburn, Ala.; Ernest

Williams; 10½ weeks; \$31,700 BELOIT COLLEGE, Beloit, Wis.; S. C. Hay-

BELOIT COLLEGE, Beloit, Wis.; S. C. Hayward; 6 weeks; \$33,000

R. Ronald Palmer; 6 weeks; \$30,200

BOWDOIN COLLEGE, Brunswick, Maine; Dan E. Christie; 6 weeks; \$51,100

BUCKNELL UNIVERSITY, Lewisburg, Pa.; Charles H. Coder, Jr.; 6 weeks; \$40,500

COLORADO STATE UNIVERSITY, Fort Collins; John H. Nath; 8 weeks; \$33,600

DUKE UNIVERSITY, Durham, N.C.; Harold J. Humm; 5 weeks; \$15,375

EMORY UNIVERSITY, Atlanta, Ga.; William H. Jones; 9 weeks; \$43,300

FISK UNIVERSITY, Nashville, Tenn.; Nelson | Fuson; 6 weeks; \$23,400 FORT HAYS KANSAS STATE COLLEGE, Hays, Kans.; Harold S. Choguill; 8 weeks; \$30,200 GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta; James A. Stanfield; 6 weeks; \$35,050 HARVARD UNIVERSITY, Cambridge, Mass.; Thomas S. Parsons, University of Toronto; 6 weeks; \$47,400 ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Peter Chiarulli; 8 weeks; \$41,100 IOWA STATE UNIVERSITY, Ames: Glenn Murphy; 6 weeks; \$43,900 Glenn Murphy; 6 weeks; \$21,400 Bernard Vinograde; 6 weeks; \$33,150 LOUISIANA STATE UNIVERSITY, Baton Rouge; Harry D. Richardson; 9 weeks; \$26,600 MICHIGAN COLLEGE OF MINING AND TECH-NoLOGY, Houghton; Kenneth M. McMillin; 10 weeks; \$35,600 NORTHWESTERN UNIVERSITY, Evanston, Ill.; Edward J. Taaffe; 6 weeks; \$31,050 OAK RIDGE INSTITUTE, Oak Ridge, N.C.; Ralph T. Overman; 6 weeks; \$17,600 Ralph T. Overman; 7 weeks; \$16,900 Ralph T. Overman; 8 weeks; \$19,200 OKLAHOMA STATE UNIVERSITY, Stillwater; Carl E. Marshall; 9 weeks; \$64,450 Jan J. Tuma; 9 weeks; \$61,347 OREGON STATE UNIVERSITY, Corvallis; A. V. Logan; 6 weeks; \$34,750 PURDUE UNIVERSITY, Lafayette, Ind.; John E. Christian; 6 weeks; \$14,500 RUTGERS, THE STATE UNIVERSITY, Brunswick, N.J.; Joshua Barlaz; 8 weeks; \$46,900 STATE University of Iowa, Iowa City; Don Lewis: 8 weeks: \$63,800 STEVENS INSTITUTE OF TECHNOLOGY, Hoboken, N.J.; Robert H. Seavy; 6 weeks; \$33.700 SYRACUSE University, Syracuse, N.Y.: M. W. Jennison; 6 weeks; \$14,500 TULANE UNIVERSITY, New Orleans, La.; John K. Hampton, Jr.; 8 weeks; \$19,200 University of Arizona, Tucson; M. R. Bottaccini; 8 weeks; \$36,100 University of California, Berkeley; George Jura; 8 weeks; \$23,700 Duane F. Marble, University of Pennsylvania; 8 weeks; \$49,600 Robert F. Murphy; 6 weeks; \$32,200 Peter K. Henrici, Los Angeles; 8 weeks; \$70,100 University of Colorado, Boulder; James Chinn; 10 weeks; \$56,100 Alec J. Kelso; 10 weeks; \$65,700 G. B. Williams, University of Michigan; 8 weeks; \$55,100 University of Georgia, Athens; John Jewett; 10 weeks; \$30,750 University of Houston, Houston, Tex.; Herbert H. Curry; 8 weeks; \$51,300 University of Illinois, Urbana; Jerry S. Dobrovolny; 8 weeks; \$52,600 Joseph Landin; 12 weeks; \$77,515

UNIVERSITY OF NORTH CAROLINA. Chapel Hill; H. D. Crockford; 6 weeks; \$38,100 University of Notre Dame, Notre Dame, Ind.; Harry C. Saxe; 7 weeks; \$38,500 University of Oklahoma, Norman; H. E. Hoffman; 8 weeks; \$22,800University of Oregon, Eugene; Richard W. Castenholz; 8 weeks; \$34,500 UNIVERSITY OF THE PACIFIC. Stockton, Calif.; Emerson G. Cobb; 5 weeks; \$16,100 University of Southwestern Louisiana, Lafayette; James R. Oliver; 9 weeks; \$21,100 University of Washington, Seattle; Roy Dubisch; 6 weeks; \$43,700 VANDERBILT UNIVERSITY, Nashville, Tenn.; R. B. Channell; 6 weeks; \$61,300 WASHINGTON STATE University, Pullman; Harry Stern; 8 weeks; \$24,000 WORCESTER POLYTECHNIC INSTITUTE, Worcester, Mass.; Glen A. Richardson; 8 weeks; \$55,800 SUMMER INSTITUTES FOR SECONDARY SCHOOL AND COLLEGE TEACHERS INDIANA UNIVERSITY, Bloomington; L. S. McClung; 4 weeks; \$28,900 MISSISSIPPI STATE UNIVERSITY, State College; Clyde Q. Sheely; 11 weeks; \$138,200 MONTANA STATE COLLEGE, Bozeman; L. O. Binder; 5 weeks; \$55,000 PHILADELPHIA COLLEGE OF PHARMACY AND Science, Pa.; Arthur Osol; 6 weeks; \$28,800 TUSKEGEE INSTITUTE, Tuskegee Institute, Ala.; B. D. Mayberry; 8 weeks; \$19,000 University of Illinois, Urbana; Peter Yankwich; 8 weeks; \$47,000 University of Kansas, Lawrence; Russell N. Bradt; 8 weeks; \$98,800 University of Oklahoma, Norman; Richard V. Andree ; 9 weeks ; \$84,675 H. E. Hoffman; 8 weeks; \$46,400 University of Washington, Seattle; Arthur D. Welander; 8 weeks; \$38,000 SUMMER INSTITUTES FOR **SECONDARY** SCHOOL TEACHERS AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; E. B. Middleton; 12 weeks; \$72,700 Melvin C. Schroeder; 12 weeks; \$63,600 Albert Collier, Galveston; \$22,900 AGRICULTURAL AND TECHNICAL COLLEGE OF NORTH CAROLINA, Greensboro; Gerald A. Edwards; 6 weeks; \$59,150 Artis P. Graves; 9 weeks; \$69,300 ALABAMA AGRICULTURAL AND MECHANICAL COLLEGE, Normal; Vandon E. White; 10 weeks; \$48,300 ALABAMA COLLEGE, Montevallo; Paul C. Bailey; 10 weeks; \$96,900 ALAMEDA COUNTY STATE COLLEGE, Heyward, Calif.; C. T. Purvis; 8 weeks; \$50,200 ALBANY STATE COLLEGE, Albany, Ga.; Alexander A. Hall, Sr.; 6 weeks; \$49,800 University of Kansas, Lawrence; Arnold ALFRED UNIVERSITY, Alfred, N.Y.; E. Gordon Ogden; 6 weeks; \$57,500 University of Mississippi, University; Wil-ALLEGHENY COLLEGE, Meadville, Pa.; Gerald S. Reisner; 7 weeks; \$67,200

A. Strassenburg; 8 weeks; \$37,400

liam A. Wilbanks; 11 weeks; \$47,500

CENTRAL MISSOURI STATE COLLEGE, Warrens-AMERICAN UNIVERSITY, Washington, D.C.; burg; Sam P. Hewitt; 10 weeks; \$90,300 Leo Schubert; 7 weeks; \$58.700 CENTRAL STATE COLLEGE, Wilberforce, Ohio; Bernard H. Johnson; 8 weeks; \$33,500 ANTIOCH COLLEGE, Yellow Springs, Ohio; James F. Corwin: 8 weeks: \$94,400 CHICAGO PARK DISTRICT, Ill.; Donald W. ARIZONA STATE UNIVERSITY, Tempe; John N. Rogers; 4 weeks; \$31,900 Aronson: 8 weeks: \$40,500 CITY COLLEGE, New York, N.Y.; Chester B. Valentine Galasyn; 8 weeks; \$71,200 Kremer; 6 weeks; \$49,900 Lehi T. Smith; 7 weeks; \$49,900 ARKANSAS STATE COLLEGE, State College; CLARK UNIVERSITY, Worcester, Mass.; John W. W. Nedrow; 5 weeks; \$35,700 S. Stubbe; 6 weeks; \$39,800 ATLANTA UNIVERSITY, Atlanta, Ga.; K. A. CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, N.Y.; F. Gordon Lindsey; 8 weeks; Huggins; 9 weeks; \$64,700 AUBURN UNIVERSITY, Auburn, Ala.; Ernest CLEMSON COLLEGE, Clemson, S.C.; Floyd I. Williams; 10 1/2 weeks; \$60,100 Ernest Williams; 101/2 weeks; \$79,300 Brownley, Jr.; 6 weeks; \$56,800 BALDWIN-WALLACE COLLEGE, Berea, Ohio; COLBY COLLEGE, Waterville, Maine; Evans Dean L. Robb; 6 weeks; \$40,000 B. Reid; 6 weeks; \$81,700 BALL STATE TEACHERS COLLEGE, Muncle, Ind.; Jerry J. Nisbet; 10 weeks; \$75,300 COLGATE UNIVERSITY, Hamilton, N.Y.; Carl W. Munshower; 6 weeks; \$49,600 BAYLOR UNIVERSITY, Waco, Tex.; Bryce C. Brown; 8 weeks; \$77,000 Oran B. Stanley; 6 weeks; \$60,300 COLLEGE OF THE HOLY CROSS, Worcester, Mass.; Robert B. MacDonnell; 6 weeks; BIRMINGHAM-SOUTHERN COLLEGE, Birmingham, Ala.; Hoyt M. Kaylor; 8 weeks; \$57,800 Vincent O. McBrien; 6 weeks; \$55,200 \$76,600 BOARD OF REGENTS OF WISCONSIN STATE COLLEGES, Madison; Eugene R. McPhee; 4 COLLEGE OF ST. THOMAS, St. Paul, Minn.: Martin Allen; 6 weeks; \$46,600 weeks: \$32,800 COLLEGE OF WILLIAM AND MARY, Williams-Eugene R. McPhee; 6 weeks; \$47,800 burg, Va.; Melvin A. Pittman; 8 weeks; BOSTON COLLEGE, Chestnut Hill, Mass.; Walter J. Fimian, Jr.; 6 weeks; \$13,600 \$119,000 COLORADO COLLEGE, Colorado Springs; Rich-William G. Guindon; 6 weeks; \$30,700 ard G. Beidleman; 8 weeks; \$42,500 Richard G. Beidleman; 8 weeks; \$88,600 BOSTON UNIVERSITY, Boston, Mass.; J. D. Barton, Jr.; 6 weeks; \$41,300 Lester A. Michel, 6 weeks; \$40,300 Bowdoin College, Brunswick, Maine; Alton COLORADO SCHOOL OF MINES, Golden; James H. Gustafson; 6 weeks; \$37,700 Samuel E. Kammerling; 6 weeks; \$38,600 L. Hall: 6 weeks: \$46,000 COLORADO STATE COLLEGE, Greeley; Bert O. Reinhard L. Korgen; 6 weeks; \$60,600 Thomas; 8 weeks; \$66,700 Noel C. Little; 6 weeks; \$14,500 COLORADO STATE UNIVERSITY, Fort Collins; BOWLING GREEN STATE UNIVERSITY, Bowling Edward B. Reed; 8 weeks; \$53,800 Green, Ohio; Bruce R. Vogeli; 5 weeks; COLORADO STATE UNIVERSITY RESEARCH \$41,400 FOUNDATION, Fort Collins; William D. Derby-BRADLEY UNIVERSITY, Peoria, Ill.; A. Wayne shire; 8 weeks; \$40,100 McGaughey; 6 weeks; \$42,200 COLUMBIA UNIVERSITY, New York, N.Y.; Daniel A. Greenberg; 6 weeks; \$70,900 BRIGHAM YOUNG UNIVERSITY, Provo, Utah; Lane A. Compton; 9 weeks; \$8,900 CONVERSE COLLEGE, Spartanburg, S. C.; BROOKLYN COLLEGE, Brooklyn, N.Y.; Meyer Walter James Wyatt; 8 weeks; \$77,600 Jordon; 6 weeks; \$35,500 CORNELL UNIVERSITY, Ithaca, N.Y.; R. Wil-BROWN UNIVERSITY, Providence, R.I.; Lealliam Shaw; 7 weeks; \$71,200 lyn B. Clapp; 6 weeks; \$44,750 Elmer R. Smith; 6 weeks; \$59,500 DRNIGON UNIVERSITY, Granville, Robert A. Roberts; 6 weeks; \$46,000 BUCKNELL UNIVERSITY, Lewisburg, Pa.; Lester Kieft; 6 weeks; \$66,500 DEPAUW UNIVERSITY, Greencastle, Ind.; CAPITAL UNIVERSITY, Columbus, Ohio; Carl Clinton B. Gass; 6 weeks; \$46,400 F. Sievert; 6 weeks; \$36,800 DILLARD UNIVERSITY, New Orleans, La.; CARLETON COLLEGE, Northfield, Minn.; Dun-Clifford R. Bryan; 6 weeks; \$29,500 can Stewart; 6 weeks; \$48,000 Kenneth W. Wegner; 6 weeks; \$52,400 Jan Hamer; 6 weeks; \$29,400 DRAKE UNIVERSITY, Des Moines, Iowa; B. E. CASE INSTITUTE OF TECHNOLOGY, Cleveland, Gillam; 8 weeks; \$59,100 Ohio; Paul E. Guenther; 7 weeks; \$60,800 Leland P. Johnson; 9 weeks; \$71,100 CATHOLIC UNIVERSITY OF AMERICA, Wash-DREW UNIVERSITY, Madison, N.J.; Bernard ington, D.C.; Raymond W. Moller; 6 weeks; Greenspan; 6 weeks; \$44,300 \$52,800 DUKE UNIVERSITY, Durham, N.C.; Thomas CATHOLIC UNIVERSITY OF PUERTO RICO, Santa D. Reynolds; 9 weeks; \$136,575 Maria, Ponce; Joseph Frohnhoefer; EARLHAM COLLEGE, Richmond, Ind.; Murvel weeks ; \$22,200 R. Garner; 6 weeks; \$26,900 University, CENTRAL MICHIGAN Mount EAST CAROLINA COLLEGE, Greenville, N.C.; Pleasant; Malcolm H. Filson; 8 weeks; Frank W. Eller; 6 weeks; \$41,900

**\$**35.300

Carl A. Scheel: 8 weeks; \$41,400

Lester H. Serier; 8 weeks; \$75,500

EASTERN ILLINOIS UNIVERSITY, Charleston;

Weldon N. Baker; 8 weeks; \$76,500

EASTERN MICHIGAN UNIVERSITY, Ypsilanti; KANSAS STATE UNIVERSITY, Manhattan; J. R. Chelikowsky; 8 weeks; \$55,200 James M. Barnes; 6 weeks; \$63,000 Leonard E. Fuller; 8 weeks; \$60,500 EASTERN NEW MEXICO UNIVERSITY, Portales: Ruth B. Thomas; 8 weeks; \$79,300 KENT STATE UNIVERSITY, Kent, Ohio; Kenneth B. Cummins; 8 weeks; \$65,400 EMORY UNIVERSITY, Atlanta, Ga.; Trevor Evans: 7 weeks: \$49.100 KENTUCKY RESEARCH FOUNDATION, Lexington; John M. Carpenter; 8 weeks; \$91,300 FISK UNIVERSITY, Nashville, Tenn.; James KENYON COLLEGE, Gambier, Ohio; J. M. R. Lawson; 8 weeks; \$82,800 Pappenhagen; 6 weeks; \$47,170 FLORIDA STATE UNIVERSITY, Tallahassee: Sherwood M. Reichard; 8 weeks; \$19,000 KNOX COLLEGE, Galesburg, Ill.; Herbert James E. Snover; 8 weeks; \$39,900 Priestley; 8 weeks; \$67,500 Rothwell Stephens; 6 weeks; \$49,800 FORDHAM UNIVERSITY, New York, N.Y.; Frederick L. Canavan; 6 weeks; \$48,000 LAFAYETTE COLLEGE, Easton, Pa.; Charles W. Saalfrank; 6 weeks; \$24,100 FORT HAYS KANSAS STATE COLLEGE, Hays: LEHIGH UNIVERSITY, Bethlehem, Pa.; Clar-W. Toalson; 9 weeks; \$56,000 ance A. Shook; 6 weeks; \$48,100 FRANKLIN AND MARSHALL COLLEGE, Lancaster, Pa.; Marvin E. Kauffman; 6 weeks; LONG BEACH STATE COLLEGE FOUNDATION. Long Beach, Calif.; M. Dale Arvey; 6 weeks; \$33,650 \$28,000 Donald W. Western; 6 weeks; \$40,300 LOUISIANA POLYTECHNIC INSTITUTE, Ruston; GENERAL EXTENSION DIVISION, OREGON STATE SYSTEM OF HIGHER EDUCATION, Port-Donald L. Fernholz; 9 weeks; \$52,500 land; J. Richard Byrne, Portland State LOUISIANA STATE UNIVERSITY, Baton Rouge; College; 8 weeks; \$38,400 Benjamin E. Mitchell; 9 weeks; \$58,300 Robert V. Nauman; 9 weeks; \$58,200 GEORGE PEABODY COLLEGE FOR TEACHERS, Hulen B. Williams; 9 weeks; \$92,200 Nashville, Tenn.; H. Craig Sipe; 10 weeks; \$78,800 MACALESTER COLLEGE, St. Paul, Minn.; Rus-H. Craig Sipe; 10 weeks; \$129,000 sell B. Hastings; 8 weeks; \$72,600 University of Maine, Orono; S. H. Kim-GEORGETOWN UNIVERSITY, Washington, D.C.; Malcolm W. Oliphant; 8 weeks; \$51,600 ball; 6 weeks; \$48,200 Charles L. Koelsche; 10 weeks; \$71,200 MARQUETTE UNIVERSITY, Milwaukee. T. H. Whitehead; 10 weeks; \$79,000 Raymond A. Bournique; 8 weeks; \$53,900 GRAMBLING COLLEGE, Grambling, La.; Archie L. J. Heider; 6 weeks; \$35,500 L. Lacey, Hunter College; 8 weeks; \$51,500 MARSHALL FOUNDATION, INC., Huntington, HAMILTON COLLEGE, Clinton, N.Y.; Brewster W. Va.; Donald C. Martin; 10 weeks; H. Gere; 6 weeks; \$52,100 \$73,000 HAMPTON INSTITUTE, Hampton, Va.; Victor MEMPHIS STATE UNIVERSITY, Tenn.; J. W. Fox; 8 weeks; \$77,200 H. Fields; 8 weeks; \$58,000 H. S. Kaltenborn; 8 weeks; \$43,300 HOPE COLLEGE, Holland, Mich.; Jay E. Folkert; 6 weeks; \$43,200 MIAMI UNIVERSITY, Oxford, Ohio; L. Warren Nelson; 6 weeks; \$63,600 Curtis A. Rogers; 6 weeks; \$42,500 Bruce V. Weidner; 8 weeks; \$97,100 UNIVERSITY, Washington, D.C.: Marie C. Taylor; 8 weeks; \$51,700 MICHIGAN STATE UNIVERSITY, East Lansing; Sherwood K. Haynes; 11 weeks; \$61,350 HUSTON-TILLOTSON COLLEGE, Ausfin, Tex.; Jack B. Kinsinger; 6 weeks; \$46.750 J. H. Morton; 6 weeks; \$50,400 T. Wayne Porter; 11 weeks; \$65,200 ILLINOIS WESLEYAN UNIVERSITY, Blooming-John Wagner; 11 weeks; \$83,000 ton; Wayne W. Wantland; 8 weeks; \$71,800 MIDDLE TENNESSEE STATE COLLEGE, Mur-INDIANA UNIVERSITY FOUNDATION, Bloomingfreesboro; J. Eldred Wiser; 11 weeks; ton; John B. Droste; 6 weeks; \$36,700 Virgil H. Heniser, Howe High School, \$103,300 MILLERSVILLE STATE COLLEGE, Millersville, Indianapolis; 4 weeks; \$27,400 Pa.; William B. McIlwaine; 6 weeks; George K. Neumann; 8 weeks; \$46,300 \$30,400 T. G. Perry; 6 weeks; \$34,200 Frederic C. Schmidt; 8 weeks; \$52,700 MISSISSIPPI SOUTHERN COLLEGE, Hatties-Marie S. Wilcox, T. C. Howe High School, burg; John H. Allen; 9 weeks; \$87,000 Indianapolis; 6 weeks; \$53,200 B. O. VanHook; 9 weeks; \$57,700 INTER AMERICAN UNIVERSITY OF PUERTO MONTANA STATE COLLEGE, Bozeman; L. O. Rico, San German; Ismael Velez; 5 weeks; Binder; 10 weeks; \$44,900 \$35,200 William B. Cook; 6 weeks; \$39,800 IOWA STATE UNIVERSITY, Ames; Orlando C. William G. Walter; 5 weeks; \$27,600 Kreider; 6 weeks; \$81,100 MONTANA STATE UNIVERSITY, Missoula; Gor-Leo A. Thomas; 6 weeks; \$20,800 don B. Castle; 8 weeks; \$14,900 JOHNS HOPKINS UNIVERSITY, Baltimore, James W. Gebhart; 10 weeks: \$78.400 Md.; William Kelso Morrill, Sr.; 6 weeks; William M. Myers; 10 weeks; \$76,000 \$64,500 MORGAN STATE COLLEGE, Baltimore, Md.; JUNIATA COLLEGE, Huntingdon, Pa.; David Thomas P. Fraser; 6 weeks; \$63,000 M. Hercules; 6 weeks; \$40,300 MURRAY STATE COLLEGE FOUNDATION, Mur-KANSAS STATE COLLEGE of Pittsburg: R. G. ray, Ky.; Walter E. Blackburn; 8 weeks; \$63,800 Smith; 8 weeks; \$76,700 KANSAS STATE TEACHERS COLLEGE, Emporia; NEBRASKA WESLEYAN UNIVERSITY. Lincoln: Walter R. French, Jr.; 8 weeks; \$67,400

Otto M. Smith; 12 weeks; \$223,000

NEW MEXICO HIGHLANDS UNIVERSITY, LAS Vegas; R. A. Deering; 7 weeks; \$37,800 Galen W. Ewing; 4 weeks; \$34,200 Clarence G. Struckwisch; 10 \$89,100 NEW MEXICO STATE UNIVERSITY, University Park; E. L. Cleveland; 8 weeks; \$51,300 NORTH CAROLINA COLLEGE at Durham; William H. Robinson; 6 weeks; \$77,900 NORTH DAKOTA STATE UNIVERSITY, Fargo; F. L. Minnear; 8 weeks; \$94,000 NORTHEAST LOUISIANA STATE COLLEGE, Monroe; William K. Easley; 9 weeks; \$57,900 B. Earl Prince; 9 weeks; \$42,200 NORTHEAST MISSOURI STATE TEACHERS COL-LEGE, Kirksville; Dean A. Rosebery; 8 weeks; \$74,900 NORTHERN MICHIGAN COLLEGE, Marquette; Holmes Boynton; 8 weeks; \$43,100 Roy E. Heath; 8 weeks; \$48,700 NORTHWESTERN STATE COLLEGE OF LOUISI-ANA, Natchitoches; James A. Noel; 9 weeks; \$64,500 NORTHWESTERN UNIVERSITY, Evanston, Ill.; E. H. C. Hildebrandt; 8 weeks; \$75,800 OAK RIDGE INSTITUTE OF NUCLEAR STUDIES. Ralph T. Overman; 4 weeks; \$6,100 Vance; 8 weeks; \$122,100 Robert C. Fisher; 8 weeks; \$91,300 A. B. Garrett; 6 weeks; \$49,750 John S. Richardson; 8 weeks; \$77,800 Edmund M. Spieker; 10 weeks; \$42,400 rence P. Eblin; 6 weeks; \$60,700 thur C. Brever: 8 weeks: \$52.100 William D. Stull; 8 weeks; \$81,700 Jack O. Purdue; 8 weeks; \$51,300 L. Herbert Bruneau; 9 weeks; \$73,800 James H. Zant; 8 weeks; \$67,600 R. Poole; 8 weeks; \$64,500 \$107,100 PRATT INSTITUTE, Brooklyn, N.Y.; Michael O'Gorman: 6 weeks: \$40.400

\$37,600 Inc., Oak Ridge, Tenn.; W. W. Grigorieff; 8 weeks; \$33,200 OBERLIN COLLEGE, Oberlin, Ohio; E. P. \$38,500 OHIO STATE UNIVERSITY, Columbus, Ohio; OHIO UNIVERSITY FUND, INC., Athens; Law-OHIO WESLEYAN UNIVERSITY, Delaware: Ar-OKLAHOMA BAPTIST UNIVERSITY, Shawnee; ORLAHOMA STATE UNIVERSITY, Stillwater; OREGON STATE UNIVERSITY, Corvallis; Albert Stanley E. Williamson; 8 weeks; \$65,500 PENNSYLVANIA STATE UNIVERSITY, University Park; William H. Powers; 6 weeks; John PRINCETON UNIVERSITY, Princeton, N.J.; A. J. Maruca; 7 weeks; \$54,200 PURDUE UNIVERSITY, Lafayette, Ind.; D. A. Davenport; 8 weeks; \$64,900 M. Wiles Keller; 8 weeks; \$68,200 J. D. Novak; 8 weeks; \$68,800 I. Walerstein; 8 weeks; \$46,000 I. Walerstein; 8 weeks; \$44,300 RANDOLPH-MACON WOMAN'S COLLEGE, Lynchburg. Va.: Helen L. Whidden: 6 weeks; \$61,000 \$50,700 REED COLLEGE, Portland, Oreg.; Frederick A. Courts: 8 weeks: \$41.400 John Leadley: 8 weeks; \$95,700 Arthur H. Livermore; 6 weeks; \$43,000 H. Brune; 8 weeks; \$59,800 RENSSELAER POLYTECHNIC INSTITUTE, Troy,

N.Y.; A. A. K. Booth; 8 weeks; \$145,800

RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; M. Ira Dubins, Oneonta; 8 weeks; \$51,900 Alexander G. Major, Potsdam; 6 weeks; \$64,300 RUTGERS. THE STATE UNIVERSITY, New Brunswick, N.J.; Joshua Barlaz; 6 weeks; \$55,700 Richard K. Olsson: 6 weeks: \$41.100 Paul G. Pearson; 6 weeks; \$43,500 Robert L. Sells; 7 weeks; \$54,800 SACRAMENTO STATE COLLEGE FOUNDATION, Sacramento, Calif.; Carl E. Ludwig; 6 Sacramento, weeks; \$60,800 Siegfried Nussenbaum; 6 weeks; \$39,800 ST. AUGUSTINE'S COLLEGE, Raleigh, N.C.; Jeffrey Gipson: 6 weeks: \$50,400 ST. CLOUD STATE COLLEGE, St. Cloud. Minn. : Harold Hopkins: 5 weeks: \$48,800 ST. LOUIS UNIVERSITY, St. Louis, Mo.: Francis Regan; 6 weeks; \$48,300 Arthur G. Rouse; 6 weeks; \$23,600 ST. MARY'S COLLEGE, Winona, Minn.; L. George; 8 weeks; \$19,000 SAN DIEGO STATE COLLEGE FOUNDATION, San Diego, Calif.; Allen M. Bassett; 8 weeks; Clifford E. Smith; 9 weeks; \$58,750 SAN JOSE STATE COLLEGE CORPORATION, San Jose, Calif.; Leonard I. Holder; 6 weeks; W. H. Myers; 6 weeks; \$57,100 SARAH LAWRENCE COLLEGE, Bronxville, N.Y.; Edward J. Cogan: 6 weeks: \$34,800 SEATTLE UNIVERSITY, Seattle, Wash.; Ernest Bertin; 8 weeks; \$75,100 SETON HILL COLLEGE, Greensburg, Pa.; Sister Mary Thaddeus; 6 weeks; \$43,200 SIMMONS COLLEGE, Boston, Mass.; Philip M. Richardson; 6 weeks; \$24.600 John A. Timm; 6 weeks; \$24,400 SOUTH CAROLINA STATE COLLEGE, Orangeburg; George W. Hunter; 8 weeks; \$78,800 SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY, Rapid City; Howard C. Peterson; 8 weeks; \$128,800 SOUTH DAKOTA STATE COLLEGE, Brookings; Kenneth E. Howard; 8 weeks; \$80,300 SOUTHEASTERN LOUISIANA COLLEGE, Hammond; Robert W. Kelly; 9 weeks; \$64,700 SOUTHEASTERN STATE COLLEGE, Durant, Okla.; Leslie A. Dwight; 8 weeks; \$72,300 SOUTHERN ILLINOIS UNIVERSITY. Carbondale; Morton R. Kenner; 8 weeks; \$62,300 I. L. Shechmeister; 8 weeks; \$62,100 SOUTHERN METHODIST UNIVERSITY, Dallas, Tex.; Joe P. Harris, Jr.; 6 weeks; \$31,000 Joe P. Harris, Jr.; 8 weeks; \$39,500 SOUTHERN UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE, Baton Rouge, La.; Rogers J. Newman; 8 weeks; \$36,600Spaulding M. Ruffin; 8 weeks; \$36,500 Lee B. Stephens; 8 weeks; \$59,500 SOUTHWESTERN STATE COLLEGE, Weatherford, Okla.; Earl A. Reynolds; 8 weeks; STANFORD UNIVERSITY, Stanford, Calif.; Harold M. Bacon; 6 weeks; \$52,400 STATE COLLEGE OF IOWA, Cedar Falls; Irvin

Dorothy C. Matala; 8 weeks; \$62,700

SYBACUSE UNIVERSITY, Syracuse, N.Y.; John G. Burdick; 6 weeks; \$51,150 Robert B. Davis; 6 weeks; \$51,700 William R. Frederickson; 6 weeks; \$62,500 TEACHERS COLLEGE, COLUMBIA UNIVERSITY, New York, N.Y.; Howard F. Fehr; 6 weeks; \$40,300 Frederick L. Fitzpatrick; 61/2 weeks; \$30,300 TEMPLE UNIVERSITY, Philadelphia, John M. Mickelson; 9 weeks; \$48,700 Elmer L. Offenbacher; 9 weeks; \$88,200 TENNESSEE AGRICULTURAL AND INDUSTRIAL STATE University, Nashville; Rutherford H. Adkins; 8 weeks; \$50,400 TEXAS CHRISTIAN UNIVERSITY, Fort Worth; John W. Forsyth; 6 weeks; \$92,200 TEXAS COLLEGE OF ARTS AND INDUSTRIES, Kingsville: James M. Robinson, Jr.: 6 weeks; \$29,100 SOUTHERN UNIVERSITY, Houston; Robert J. Terry; 12 weeks; \$94,200 TEXAS TECHNOLOGICAL COLLEGE, Lubbock; Earl D. Camp; 9 weeks; \$86,700 Charles L. Riggs: 9 weeks; \$66,700 TEXAS WOMAN'S UNIVERSITY, Denton; Harold T. Baker; 9 weeks; \$21,300 Harlan C. Miller; 6 weeks; \$39,200 THIEL COLLEGE, Greenville, Pa.; Bela G. Kolossvary; 6 weeks; \$50,800 TUFTS UNIVERSITY, Medford, Mass.; M. Kent Wilson; 6 weeks; \$44,400 TULANE UNIVERSITY, New Orleans, La.; Gail S. Young; 9 weeks; \$75,800 TUSKEGEE INSTITUTE, Tuskegee Institute, Ala.; Lawrence F. Koons; 8 weeks; \$58,300 Union College & University, Schenectady, N.Y.; D. K. Baker; 8 weeks; \$130,800 University of Alaska, College; William R. Cashen; 8 weeks; \$70,000 University of Arizona, Tucson; Millard G. Seeley; 8 weeks; \$65,500 Arthur H. Steinbrenner; 8 weeks; \$63,900 University of Arkansas, Fayetteville; William R. Orton; 6 weeks; \$48,400 Leo J. Paulissen; 6 weeks; \$59,600 University of California, Berkeley; Gideon T. James; 8 weeks; \$62,700 Lola S. Kelly; 8 weeks; \$28,500 Mario Menesini; 8 weeks; \$64,400 Roderick B. Park; 6 weeks; \$39,550 Clifford Bell, Los Angeles; 6 weeks; \$33,200 Robert L. Pecsok, Los Angeles; 6 weeks; \$30,850 Norman A. Watson, Los Angeles: 6 weeks: \$29,200 William H. Meyer, Santa Barbara; 6 weeks; \$49,800 University of Cincinnati, Ohio; H. David Lipsich; 6 weeks; \$51,800 University of Colorado, Boulder; John M. Cleveland; 8 weeks; "54,000 248

million; M. M. Hasse; 8 weeks; \$77,900

\$64,700

STATE UNIVERSITY OF SOUTH DAKOTA, Ver-John R. Clopton; 8 weeks; \$113,700 Leon W. Rutland, Jr.; 8 weeks; \$40,900 Robert L. Stevenson; 8 weeks; \$65,900 University of Connecticut, Storrs; David STEPHEN F. AUSTIN STATE COLLEGE, Nacog-J. Blick ; 6 weeks ; \$59,700 doches, Tex.; E. L. Miller; 6 weeks; \$30,400 University of Dayton, Dayton, Ohio; K. C. STEVENS INSTITUTE OF TECHNOLOGY, Hoboken, N.J.; Robert H. Seavy; 6 weeks; Schraut; 6 weeks; \$40,300 University of Delaware, Newark; John A. Brown; 6 weeks; \$29,800 University of Florida, Gainesville; N. Eldred Bingham; 8 weeks; \$50,800 H. H. Sisler; 8 weeks; \$63,100 University of Hawaii, Honolulu; Sidney C. Hsiao; 6 weeks; \$15,800 Harry Zeitlin; 6 weeks; \$67,900 University of Idaho, Moscow; William F. Barr; 8 weeks; \$26,800 Edgar H. Grahn; 8 weeks; \$97,200 Hans Sagan; 8 weeks; \$43,400 University of Illinois, Urbana; Max Beberman ; 6 weeks ; \$220,450 Haim Reingold; 8 weeks; \$105,800 University of Kansas, Lawrence; Edward I. Shaw; 8 weeks; \$19,000 University of Maryland, College Park; Joshua R. C. Brown; 7 weeks; \$85,600 UNIVERSITY OF MINNESOTA, Minneapolis; William H. Marshall; 5 weeks; \$20,400 Paul R. O'Connor; 6 weeks; \$40,500 Frank Verbrugge; 10 weeks; \$114,650 Blanchard O. Krogstad, Duluth; 5 weeks; \$26,500 Francis A. Spurrell, St. Paul; 6 weeks; \$14,500 University of Mississippi, University: Noel A. Childress; 11 weeks; \$115,400 University of Missouri, Columbia; Robert F. Brooks; 8 weeks; \$60,000 Paul B. Burcham; 8 weeks; \$51,000 Wesley J. Dale; 8 weeks; \$64,900 Harold Q. Fuller; 8 weeks; \$96,500 University of Nebraska, Lincoln; Wendell L. Gauger; 8 weeks; \$90,900 Walter E. Mientka; 8 weeks; \$52,100 University of Nevada, Reno; R. N. Thompson; 6 weeks; \$47,800 UNIVERSITY OF NEW HAMPSHIRE, Durham; Harold A. Iddles; 8 weeks; \$79,300 University of New Mexico, Albuquerque; Frank C. Gentry; 8 weeks; \$65,200 Loren D. Potter; 9 weeks; \$21,500 University of North Carolina, Chapel Hill; Edward A. Cameron; 6 weeks; \$91,900 Roy L. Ingram; 6 weeks; \$38,800 Joseph W. Straley; 6 weeks; \$33,310 University of North Dakota, Grand Forks; J. Donald Henderson; 8 weeks; \$80,600 UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Emil T. Hofman; 7 weeks; \$73,100
Arnold E. Ross; 7 weeks; \$152,600 University of Oklahoma, Norman; H. E. Hoffman; 8 weeks; \$38,700 H. E. Hoffman; 4 weeks; \$40,300 H. E. Hoffman; 9 weeks; \$64,700 H. E. Hoffman; 9 weeks; \$64,900 University of Oregon, Corvallis: A. F. Moursund; 8 weeks; \$65,400 Arnold L. Soderwall; 8 weeks; \$35,000 University of Pennsylvania, Philadelphia; J. F. Hazel; 6 weeks; \$80,600 University of Pittsburgh, Pa.; John C.

Knipp; 6 weeks; \$31,800

University of Portland, Portland, Oreg.; West Virginia University, Morgantown; C. W. Bonhorst; 6 weeks; \$34,900 | James B. Hickman; 10 weeks; \$95,600 C. W. Bonhorst; 6 weeks; \$34,900 University of Pubric Rico, Rio Piedras; Augusto Bobonis; 8 weeks; \$95,200

Juan D. Curet; 7 weeks; \$70,225 Mariano Garcia: 7 weeks; \$60,575 UNIVERSITY OF REDLANDS, Redlands, Calif.; Reinhold J. Krantz; 9 weeks; \$57,175 UNIVERSITY OF RHODE ISLAND, Kingston; William E. Werner: 6 weeks; \$43,000 UNIVERSITY OF ROCHESTER, Rochester, N.Y.; John J. Montean; 6 weeks; \$40,000

John J. Montean; 6 weeks; \$39,000 University of the South, Sewance, Tenn.; H. Malcolm Owen; 8 weeks; \$60,700 University of South Carolina, Columbia; W. L. Williams; 8 weeks; \$85.400 University of Southern California, Los Angeles; Paul A. White; 6 weeks; \$43,300 UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette; James R. Oliver; 9 weeks; \$53,800

James R. Oliver; 9 weeks; \$54,900 James R. Oliver; 9 weeks; \$57,400 University of Tennessee, Knoxville; Edgar D. Eaves; 8 weeks; \$62,500 UNIVERSITY OF TEXAS, Austin; Addison E.

Lee; 9 weeks; \$117,075 UNIVERSITY OF UTAH, Salt Lake City; Robert Anderson; 8 weeks; \$36,900

E. Allan Davis; 7 weeks; \$65,400 Thomas J. Parmley; 8 weeks; \$70,000 Robert C. Pendleton; 8 weeks; \$18,800 University of Vermont, Burlington; N. James Schoomaker; 7 weeks; \$67,000

Nelson L. Walbridge; 8 weeks; \$65,100 University of Virginia, Charlottesville; James W. Cole, Jr.; 8 weeks; \$74,378

William C. Lowry; 8 weeks; \$40,700 UNIVERSITY OF WASHINGTON, Seattle; Rich-

ard H. Fleming; 9 weeks; \$47,500 L. A. Sanderman; 8 weeks; \$52,400 University of Wisconsin, Madison; Robert A. Jaggard, Milwaukee; 8 weeks; \$62,700

University of Wyoming, Laramie; Carl A. Cinnamon; 8 weeks; \$20,400 Samuel W. Harding; 10 weeks; \$99,900

W. Norman Smith; 5 weeks; \$49,000 UTAH STATE UNIVERSITY, Logan; Merrill H. Gunnell; 10 weeks; \$81,500

Neville C. Hunsaker; 10 weeks; \$79,700 VALPARAISO UNIVERSITY, Valparaiso, Ind.; Arthur E. Hallerberg; 7 weeks; \$40,900 VASSAR COLLEGE, Poughkeepsie, N.Y.; John H. Johnsen; 6 weeks; \$37,700 VILLANOVA UNIVERSITY, VIllanova, Pa.; J. Bernard Hubbert; 6 weeks; \$44,700

VIRGINIA STATE COLLEGE, Petersburg; Rich-

ard H. Dunn; 8 weeks; \$111,800

WAKE FOREST COLLEGE, Winston-Salem, N.C.; John W. Nowell; 6 weeks; \$58,700 George P. Williams, Jr.; 6 weeks; \$24,825 WASHINGTON STATE UNIVERSITY, Pullman;

Alfred B. Butler; 8 weeks; \$92,500 Sidney G. Hacker; 8 weeks; \$64,300

WAYNE STATE UNIVERSITY, Detroit, Mich.; Walter Chavin; 8 weeks; \$19,000 John T. Sanford; 8 weeks; \$64,900

WESLEYAN UNIVERSITY, Middletown, Conn.; Joseph S. Daltry; 6 weeks; \$99,000

WEST VIRGINIA WESLEYAN COLLEGE, Buckhannon; John C. Wright; 6 weeks; \$59,200 WESTERN ILLINOIS UNIVERSITY, Macomb; Arnold Wendt: 6 weeks: \$31,400

WESTERN MARYLAND COLLEGE, Westminster; Harwell P. Sturdivant; 6 weeks; \$38,600 WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; William M. Heston; 11 weeks; \$130,000

STATE WESTERN WASHINGTON COLUMB Bellingham; James S. Martin; 8 weeks; \$45,400

Sheldon T. Rio; 9 weeks; \$59,700

WILLAMETTE UNIVERSITY, Salem, Paul M. Duell; 6 weeks; \$47,700 Oreg. : WISCONSIN STATE COLLEGE, River Falls; Richard J. Delorit; 4 weeks; \$40,600

WITTENBERG UNIVERSITY, Springfield, Ohio; Everett H. Bush; 8 weeks; \$45,500

YALE UNIVERSITY, New Haven, Conn.; Stuart R. Brinkley; 6 weeks; \$86,000

#### SUMMER INSTITUTES FOR ELEMENTARY SCHOOL PERSONNEL

ARIZONA STATE UNIVERSITY, Tempe; Theodore W. Munch; 6 weeks; \$32,800

BELOIT COLLEGE, Beloit, Wis.; Edwin F. Wilde: 6 weeks; \$29,300

BIRMINGHAM-SOUTHBRN COLLEGE, Birmingham, Ala.; Hoyt M. Kaylor; 8 weeks; \$37,700

DEPAHW University, Greencastle, Ind.; Clinton B. Gass; 6 weeks; \$25,500

EASTERN MICHIGAN UNIVERSITY, Ypsilanti; Albert W. Brown; 6 weeks; \$34,500

Howard College, Birmingham, Ala.; R. E. Wheeler: 6 weeks: \$32,100

NEW MEXICO STATE UNIVERSITY, University Park; Darrell S. Willey; 6 weeks; \$32,200 NORTHERN ILLINOIS UNIVERSITY, DeKalb; Frederick W. Rolf; 8 weeks; \$46,300

NORTHERN MICHIGAN COLLEGE, Marquette; Henry S. Heimonen; 6 weeks; \$31,900

PRAIRIE VIEW AGRICULTURAL AND MECHANI-CAL COLLEGE; Prairie View, Tex.; Israel E. Glover; 6 weeks; \$27,700

RUTGERS, THE STATE UNIVERSITY, New Brunswick, N.J.; Guido Weigend; 6 weeks; \$36,200

SAN JOSE STATE COLLEGE FOUNDATION, San Jose, Calif.; John L. Marks; 6 weeks; \$34,000

STATE COLLEGE, Durant, SOUTHEASTERN Okla.; Leslie A. Dwight; 4 weeks; \$21,000 STATE TEACHERS COLLEGE, Minot, N. Dak.; Cyril C. Moore; 8 weeks; \$36,300

UNIVERSITY OF BUFFALO, Buffalo, Stephen S. Winter; 6 weeks; \$32,100

UNIVERSITY OF GEORGIA, Athens; Charles L. Koelsche; 10 weeks; \$36,300

UNIVERSITY OF MARYLAND, College Park; John R. Mayor; 6 weeks; \$32,800

University of North Dakota, Grand Forks; Bernt L. Wills; 8 weeks; \$42,200

UNIVERSITY OF OREGON, Eugene; James C. Stovall; 8 weeks; \$42,400

UNIVERSITY OF UTAH, Salt Lake City: L. | COMMITTEE FOR ADVANCED SCIENCE TRAIN-Edwin Hirschi; 8 weeks; \$36,500

WEBSTER COLLEGE, Webster Groves, Mo.; Robert B. Davis, Syracuse University; 6 weeks; \$30,300

# SUMMER SCIENCE TRAINING PROGRAM FOR SECONDARY SCHOOL STUDENTS

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; Melvin Eisner; 6 weeks; \$9,400

William S. McCulley; 6 weeks; \$8,650 John J. Sperry; 6 weeks; \$5,760

ALBERT EINSTEIN MEDICAL CENTER, Philadelphia, Pa.; Samuel J. Ajl; 8 weeks; \$4,780 AMERICAN MUSEUM-HAYDEN PLANETARIUM, New York, N.Y.; Franklyn M. Branley; 4 weeks; \$8,260

AMERICAN UNIVERSITY, Washington, D.C.; Leo Schubert; 9 weeks; \$6,050

APPALACHIAN STATE TEACHERS COLLEGE, Boone, N.C.; F. Ray Derrick; 5 weeks; \$16,290

ARIZONA STATE COLLEGE, Flagstaff; J. Harvey Butchart; 5 weeks; \$7,560

ASSUMPTION COLLEGE, Worcester, Alfons J. van der Linden; 6 weeks; \$16,460 AUBURN UNIVERSITY, Auburn, Ala.; Joseph T. Hood; 8 weeks; \$8,960

AUGSBURG COLLEGE AND THEOLOGICAL SEMI-NARY, Minneapolis, Minn.; Courtland L. Agre; 6 weeks; \$10,130

BENNETT COLLEGE, Greensboro, N.C.; J. Henry Sayles; 6 weeks; \$28,150

BOWLING GREEN STATE UNIVERSITY, Bowling Green, Ohio; W. H. Hall; 7 weeks; \$7,000 BOYCE THOMPSON INSTITUTE FOR PLANT RE-SEARCH, INC., Yonkers, N.Y.; Lawrence P. Miller; 6 weeks; \$6,100

BRANDEIS UNIVERSITY, Waltham, Mass.: Philip A. St. John; 6 weeks; \$3,580 Providence, Brown University, R.I.;

Charles B. MacKay; 6 weeks; \$24,960

BUCKNELL UNIVERSITY, Lewisburg, Pa.; Lester Kieft; 6 weeks; \$9,910

BUTLER UNIVERSITY, Indianapolis, Ind.; William H. Bessey; 7 weeks; \$7,360

CAPE HAZE MARINE LABORATORY, Sarasota, Fla.; Eugenie Clark; 8 weeks; \$2,240

CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Edward R. Schatz; 9 weeks; \$8,790

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; L. J. Green; 7 weeks; \$6,070

CITY COLLEGE, New York, N.Y.; Chester B. Kremer; 6 weeks; \$13,970

CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, N.Y.; Harry S. Bingham; 8 weeks; \$24,700

CLARK UNIVERSITY, Worcester, Mass.; Roy S. Anderson; 10 weeks; \$1,340

COLLEGE OF THE HOLY NAMES, Oakland, Calif.; Sister Mary Baptista; 6 weeks; \$11,990

COLORADO COLLEGE, Colorado Springs; Richard G. Beidleman; 8 weeks; \$13,410

COLORADO SCHOOL OF MINES, Golden; James L. Hall; 6 weeks; \$14,715

ING, Los Angeles, Calif.; Harry Sobel; 10 weeks; \$8,520

CORNELL UNIVERSITY, Ithaca, N.Y.; Philip G. Johnson; 7 weeks; \$4,960

DENISON UNIVERSITY, Granville, Ohio; Robert W. Alrutz; 8 weeks; \$10,310

DEPAUL UNIVERSITY, Chicago, Ill.; John R. Cortelyou; 8 weeks; \$2,330

EMORY & HENRY COLLEGE, Em Marius Blesi; 5 weeks; \$12,760 Emory, Va.;

EMORY UNIVERSITY, Atlanta, Ga.; James C. Lester; 5 weeks; \$26,170

FLORIDA STATE UNIVERSITY, Tallahassee; Robert Kalin; 6 weeks; \$11,000

Extension Division, GENERAL STATE SYSTEM OF HIGHER EDUCATION, Portland; Robert L. Broussard; 8 weeks; \$11,420

GEORGETOWN UNIVERSITY, Washington, D.C.; Lawrence S. Lillenfield; 9 weeks; \$7,500

GRAMBLING COLLEGE, Grambling, La.; Emile C. Fonsworth; 8 weeks; \$18,650

GRINNELL COLLEGE, Grinnell, Iowa; Neil D. Kent; 7 weeks; \$20,750

HIRAM COLLEGE, Hiram, Ohio; Edward B. Rosser; 6 weeks; \$13,140

University, Washington, D.C.; HOWARD Herman Branson; 8 weeks; \$17,250

HUMBOLDT STATE COLLEGE FOUNDATION, Arcata, Calif.; John E. Butler; 6 weeks; \$17,870

HUNTER COLLEGE, New York, N.Y.; Melvin S. Schwartz; 6 weeks; \$7,460

Henry D. Thompson; 5 weeks; \$4,820 ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Haim Reingold; 36 weeks; \$18,720 Indiana University, Bloomington; Paul Klinge; 8 weeks; \$24,120

John B. Patton; 10 weeks; \$2,200

INTER AMERICAN UNIVERSITY OF PUERTO Rico, San German; Ismael Velez; 5 weeks; \$11,930

Ismael Velez; 3 weeks; \$5,780

JACKSON STATE COLLEGE, Jackson, Miss.; Benjamin H. McLemore; 8 weeks; \$14,300 KANSAS STATE TEACHERS COLLEGE, Emporia: Otto M. Smith; 6 weeks; \$14,780

KENTUCKY STATE COLLEGE, Frankfort : Lloyd E. Alexander; 8 weeks; \$15,810

LEHIGH UNIVERSITY, Bethlehem, Pa.; Albert Wilansky: 6 weeks: \$7,020

LEMOYNE COLLEGE, Memphis, Tenn.; W. W. Gibson; 6 weeks; \$9,860

LIVINGSTON STATE COLLEGE. Livingston. Ala.; Lillian C. Manley; 6 weeks; \$5,230 LOUISIANA POLYTECHNIC INSTITUTE. Ruston:

William R. Higgs; 9 weeks; \$15,920 LOUISIANA STATE UNIVERSITY, Baton Rouge: John F. Christman; 9 weeks; \$24,340

LOYOLA UNIVERSITY, Chicago, Ill.; Thomas E. Malone; 8 weeks; \$9,930

MANCHESTER COLLEGE, North Manchester, Ind.: Harry R. Weimer: 8 weeks: \$9.380 MANHATTAN COLLEGE, New York, N.Y.; C. Leonard O'Connor; 6 weeks; \$11,550

MICHIGAN STATE UNIVERSITY, East Lansing; M. Isobel Blyth; 6 weeks; \$23,810

MISSISSIPPI STATE UNIVERSITY, State Col-Southern Methodist University, Dallas, lege; Clyde Q. Sheely; 4 weeks; \$19,620 Tex; Frank J. Palas; 6 weeks: \$8,910 MORGAN STATE COLLEGE, Baltimore Md.; John W. King; 6 weeks; \$20,020 SOUTHERN STATE COLLEGE, Magnolia, Ark.; John J. Chapman; 6 weeks; \$5,350 STATE UNIVERSITY OF IOWA, IOWA City; Rob-MORRIS BROWN COLLEGE, Atlanta, Ga.; James ert E. Yager; 8 weeks; \$29,370 H. Penn; 8 weeks; \$17,250 MURBAY STATE COLLEGE FOUNDATION, Murray, Ky.; W. E. Blackburn; 8 weeks; STATE UNIVERSITY OF SOUTH DAKOTA, Ver-Wayne W. Gutzman; 6 weeks; million; \$10,450 \$23,520 SYRACUSE UNIVERSITY, Syracuse, N.Y.; Al-NEWARK COLLEGE OF ENGINEERING RESEARCH fred T. Collette: 6 weeks: \$16.270 FOUNDATION, Newark, N.J.; Joseph M. Fitz-TEMPLE UNIVERSITY, Philadelphia, Pa.; Walgerald; 6 weeks; \$5,300 ter S. Lawton; 6 weeks; \$9,270 NEW MEXICO HIGHLANDS UNIVERSITY, Las Vegas; Lora M. Shields; 6 weeks; \$15,000 TEXAS COLLEGE, Tyler; Sekender A. Khan: 6 weeks; \$8,310 CAROLINA COLLEGE AT DURHAM: NORTH James S. Lee; 7 weeks; \$20,000 TOUGALOO SOUTHERN CHRISTIAN COLLEGE, Tougaloo, Miss.; A. A. Branch; 6 weeks; NORTH DAKOTA STATE UNIVERSITY, Fargo; \$17,310 J. A. Callenbach; 10 weeks; \$1,670 Donald Schwartz; 8 weeks; \$2,090 TUFTS UNIVERSITY, Medford, Mass.; William Stergios, Braintree; 10 weeks; \$25,550 NORTHEASTERN UNIVERSITY, Boston, Mass.; UNIVERSITY OF ALASKA, College; William S. Charles M. Goolsby; 6 weeks; \$19,550 Wilson: 6 weeks: \$17.900 NORTHERN MICHIGAN COLLEGE, Marquette; John P. Farrell; 6 weeks; \$14,150 University of Arizona, Tucson; Thomas L. Martin, Jr.; 6 weeks; \$17,050 NORTHWESTERN STATE COLLEGE OF LOUISI-John W. Robson; 10 weeks; \$7,230 ANA. Natchitoches; Richard E. Garth; 9 University of Bridgeport, Bridgeport. weeks; \$7,430 Conn.; Earle M. Bigsbee; 7 weeks; \$25,000 NORTHWESTERN UNIVERSITY, Evanston, Ill.; F. G. Seulberger; 5 weeks; \$28,070 University of Buffalo, Buffalo, N.Y.: Harriet F. Montague; 6 weeks; \$3,370 OHIO STATE UNIVERSITY, Columbus; Paul T. University of California, Berkeley; How-Yarrington; 9 weeks; \$17,300 ard A. Shugart; 9 weeks; \$26,640
Frantisek Wolf; 6 weeks; \$9,000
Norris W. Rakestraw, La Jolla; 9 weeks; OHIO WESLEYAN UNIVERSITY, Delaware; Thomas S. Oey; 10 weeks; \$1,970 OKLAHOMA STATE UNIVERSITY, Stillwater; L. \$7,990 F. Sheerar; 6 weeks; \$15,300 Clifford Bell, Los Angeles; 6 weeks; OREGON STATE UNIVERSITY, Corvallis; R. E. \$9,740 Gaskell; 7 weeks; \$21,560 John F. Tatom; 6 weeks; \$12,930 University of Florida, Gainesville; Luther A. Arnold; 8 weeks; \$12,290 PENNSYLVANIA STATE UNIVERSITY, University University of Georgia, Athens; C. T. Park; Richard D. Schein; 8 weeks; \$2,000 Clark; 6 weeks; \$10,650 PRAIRIE VIEW AGRICULTURAL AND MECHAN-ICAL COLLEGE, Prairie View, Tex.; Israel E. UNIVERSITY OF HAWAII. Honolulu; Toshio Murashige; 7 weeks; \$18,960 Glover; 6 weeks; \$7,780 University of Houston, Houston, Tex.; E. E. O'Banion; 6 weeks; \$8,220 John C. Allred; 6 weeks; \$17,570 PURDUE UNIVERSITY, Lafayette, Ind.; Rich-University of Illinois, Urbana; Jerry S. ard C. Donson; 8 weeks; \$20,210 Dobrovolny; 6 weeks; \$13,090 F. A. Kummerow; 8 weeks; \$3,890 ROLLINS COLLEGE, Winter Park, Fla.; Bruce B. Wavell; 6 weeks; \$7,620 UNIVERSITY OF MARYLAND, College Park; ROSCOE B. JACKSON MEMORIAL LABORATORY, James C. Armstrong; 13 weeks; \$6,690 Bar Harbor, Maine; John L. Fuller; 10 University of Miami, Coral Gables, Fla.; weeks; \$15,720 Herman Meyer; 6 weeks; \$8,900 ROSWELL PARK MEMORIAL INSTITUTE, Buf-University of Michigan, Ann Arbor; Leigh falo, N.Y.; Edwin Mirand; 9 weeks; \$18,945 C. Anderson; 6 weeks; \$20,380 ST. LOUIS UNIVERSITY, St. Louis, Mo.; John University of Mississippi, Unisamuel F. Clark; 6 weeks; \$13,970 University: J. Andrews; 4 weeks; \$5,680 SAN DIEGO STATE COLLEGE FOUNDATION, San Diego, Calif.; Edmund I. Deaton; 6 weeks; Paul G. Hahn; 6 weeks; \$8,630 University of Missouri, Columbia: Charles \$8,640 R. Remington, Jr., Rolla; 7 weeks; \$12,250 SAN FERNANDO VALLEY STATE COLLEGE UNIVERSITY OF NEVADA, Reno; Wendell A. FOUNDATION, Northridge, Calif.; Lorence G. Mordy; 7 weeks; \$23,525 Collins: 6 weeks: \$7,740 University of North Carolina, Chapel SAN JOSE STATE COLLEGE FOUNDATION, SAN Hill; Samuel B. Knight; 6 weeks; \$22,410 Jose, Calif; Benjamin F. Naylor; 6 weeks; Hollis J. Rogers, Greensboro; 5 weeks; \$14,350 \$10,470 SOUTH DAKOTA STATE COLLEGE, Brookings; University of North Dakota, Grand Forks; Stanley Sundet; 6 weeks; \$7,920 Paul B. Kannowski; 8 weeks; \$14,270 Durant, SOUTHEASTERN STATE COLLEGE, UNIVERSITY OF NOTRE DAME, Notre Dame, Okla.; Leslie Dwight; 6 weeks; \$6,700 Ind.: Arnold E. Ross: 7 weeks: \$24,370 SOUTHERN ILLINOIS UNIVERSITY, Carbondale; UNIVERSITY OF OKLAHOMA, Norman; H. E. Howard G. Applegate; 6 weeks; \$600 George H. Gass; 8 weeks; \$19,690

Hoffman: 8 weeks: \$25,500

Francisco Garriga; 6 weeks; \$9,300

Eddie Ortiz; 6 weeks; \$11,720

University of Rhode Island, Kingston; James W. Cobble: 6 weeks: \$4.990

UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette; James R. Oliver; 9 \$12.940

UNIVERSITY OF TENNESSEE, Knoxville; J. H. Wood; 6 weeks; \$10,310

University of Texas, Austin; H. J. Ettlinger; 6 weeks; \$5,970

William C. Gardiner, Jr.; 6 weeks; \$8,980 Irwin Spear; 7 weeks; \$11,240

Murray M. Copeland, Houston; 8 weeks; \$3,390

University of Wisconsin, Madison; George W. Sledge; 6 weeks; \$16,320

VARIETY CHILDREN'S RESEARCH FOUNDATION. Miami, Fla.; M. Michael Sigel; 12 weeks; \$2,610

VASSAR COLLEGE, Poughkeepsie, N.Y.; Joseph F. Mucci; 5 weeks; \$5,800

VETERANS ADMINISTRATION HOSPITAL, Albuquerque, N. Mex.; L. Louise Leonard; 8 weeks: \$500

UNION UNIVERSITY, Richmond; VIRGINIA Walter O. Bradley; 6 weeks; \$12,350

WESLEYAN UNIVERSITY, Middletown, Conn.; Ernest Stabler; 6 weeks; \$20,000

Lamar Washington, Massachusetts Institute of Technology, Boston; 8 weeks; \$45,340

WEST VIRGINIA UNIVERSITY, Morgantown; O. J. Burger; 5 weeks; \$4,550

WESTERN ILLINOIS UNIVERSITY, Macomb: Eugene Pergament; 8 weeks; \$4,380

WESTERN KENTUCKY STATE COLLEGE, Bowling Green; Tate C. Page; 8 weeks; \$22,720 WESTERN MICHIGAN UNIVERSITY, Kalamazoo: George C. Mallinson; 6 weeks; \$13,520

WESTERN STATE COLLEGE OF COLORADO, Gunnison; Aubrey W. Lawrence; 6 weeks; \$8,550

WHITWORTH COLLEGE, Spokane, Wash.; Hugh W. Johnston; 8 weeks; \$9,990

WILEY COLLEGE, Marshall, Tex.; Rufus L. McGee; 6 weeks; \$5,950

WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY, Shrewsbury, Mass.; Frederick R. Avis; 9 weeks; \$20,020

YESHIVA UNIVERSITY, New York Moses D. Tendler: 9 weeks: \$12.950 York, N.Y.; William Zlot; 8 weeks; \$6,480

# SUPPLEMENTARY STUDENT SCIENCE PROJ-**ECTS**

AMBRICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; Dael Wolfie; Holiday Lectures for Selected High School Students; 2 years; \$127,360

COUNCIL OF CHIEF STATE SCHOOL OFFICERS, Washington, D.C.; Edgar Fuller; Revision of the Purchase Guide; 2 years; \$45,090

DARTMOUTH COLLEGE, Hanover, N.H.; William P. Davis, Jr.; Summer Science Program for Talented High School Students and Selected Secondary School Teachers; 6 weeks; \$36,080

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; Films; 1 year; \$149,845

UNIVERSITY OF PUERTO RICO, Rio Piedras; J. B. Rosser; Printing and Distribution of Copies of a Pamphlet Entitled "Careers in

Mathematics"; \$4,000
Richard C. Vetter; Booklet on Oceanography entitled "Turn to the Sea"; 14 months; \$5,770

NATIONAL SCIENCE TEACHERS ASSOCIATION, Washington, D.C.; Robert H. Carleton; Supplementary Student Science Project; weeks; \$9,195

SCIENCE SERVICE, INC., Washington, D.C.; Karl Frank; Supplementary Student Science Project: 16 months: \$45,090

# SUPPLEMENTARY TEACHING AIDS

ADELPHI COLLEGE, Garden City, N.Y.; Richard M. Klein; Fish Experiments for Undergraduate Instruction in Learning and Motivation; 1 year; \$5,420

AMERICAN PSYCHOLOGICAL ASSOCIATION, Washington, D.C.; John G. Darley and Robert B. Hudson; Film Series in Psychology; 1 year; \$187,770

Boston College, Chestnut Hill, Mass.; Stanley J. Bezuszka; Development of Formal Deductive and Symbolic Logic Training and Teaching Equipment; 1 year; \$10,120 CARLETON COLLEGE, Northfield, Minn.; William A. Butler, Robert J. Kolenkow and Robert A. Reitz; Demonstration of Properties of Light With an Optical Maser; 1 year; \$3,535

CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Walton Forstall; Development of Take-Home Kits for Experimentation in Engineering; 1 year; \$15,525
Milton C. Shaw; Development of Analog

Experiments and Apparatus for Studying the Plastic Flow Characteristics of Materials; 1 year; \$13,800

CATHOLIC UNIVERSITY, Washington, D.C.; A. J. Durelli; Development of Laboratory Equipment for Experimental Stress Analysis Demonstrations; 2 years; \$20,870

COLORADO STATE UNIVERSITY, Fort Collins: John J. Faris; Development of a Microwave Spectroscopy Experiment for Undergraduates; 9 months; \$1,480

COLUMBIA UNIVERSITY, New York, N.Y.; H. Dean Baker; Development of Energy Conversion Devices; 1 year; \$39,070
Allan M. Sachs; Development of a Spark

Chamber; 1 year; \$7,990

EDUCATIONAL SERVICES, INC., Watertown, Mass.; Ascher H. Shapiro, Massachusetts Institute of Technology; Motion Pictures to Improve Instruction in Fluid Dynamics;

Jean; \$324,000

Jerrold R. Zacharias, Massachusetts Institute of Technology; Testing and Evaluation of the Extended PSSC Films for Television and Classroom Use; 6 months; \$13,058

Jerrold R. Zacharias; Production of Additional Films for the PSSC Course; 6 months; \$112,850

Jerrold R. Zacharias and James S. Strickland; The Production of Films of Demonstration and Laboratory Experiments for College and University Physics Courses; 1 year; \$288,900

Jerrold R. Zacharias, Massachusetts Institute of Technology; Production of PSSC FLORIDA STATE UNIVERSITY, Tallahassee; Guenter Schwarz; Experiments and Demonstrations for the Three Semester General Physics Course: 2 years: \$27,600

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta; M. R. Carstens; Development of Equipment for the Study of Unsteady Flow in a Pipe; 1 year; \$7,520

HARVARD UNIVERSITY, Cambridge, Mass.; Louis F. Fieser; Development of Low-Cost Skeletal Models of Molecules; 1 year; \$17.250

Eugene G. Rochow; Development of Equipment for Demonstrating Magnetic Susceptibility and Absorption/Emission Spectra; 1 year; \$11,860

HUNTER COLLEGE, New York, N.Y.; Dorothy N. Naiman; Development of a Model of the Human Brain for Individual Student Production and Use; 1 year; \$2,350

INDIANA UNIVERSITY FOUNDATION, Bloomington; Clarence M. Flaten; Production of Developmental Anatomy Films; 1 year; \$31,500

IOWA STATE UNIVERSITY, Ames; Paul F. Romberg; Preparation of Educational Motion Pictures in the Plant Sciences; 15 months; \$59,500

JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Donald W. Benson; Development of a Manikin for Teaching Endotracheal Intubation; 1 year; \$4,490

H. E. Hoelscher; "Invisible" Fixed and Fluidized Beds for Laboratory Demonstration and Study; 1 year; \$11,860

KENYON COLLEGE, Gambier, Ohio; Franklin Miller, Jr.; The Production of a Series of Short Teaching-Aid Film in Physics; 6 months; \$44,640

MANHATTAN COLLEGE, New York, N.Y.; C. Albert Welsh; Development of Apparatus for Automatic Plotting of Phase, Gain, and Root Locus from Pole-Zero Constellations; 2 years; \$9,530

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; Richard C. Vetter; Filmstrips in Oceanography; 18 months; \$44,120

NEW MEXICO HIGHLANDS UNIVERSITY, Las Vegas; Galen W. Ewlng; Equipment Development for College and University Courses in Instrumental Methods in Chemical Analysis, Physical Chemistry, and Related Fields; 2 years; \$13,110

PRINCETON UNIVERSITY, Princeton, N.J.; Hubert N. Alyea; Development of Tested Overhead Projection Series of Experiments; 1 year; \$29,850

REED COLLEGE, Portland, Oreg.; Frederick D. Tabbutt; Development of Equipment and Experiments for Teaching Instrumental Analysis; 8 months; \$5,985

RENSSELAER POLYTECHNIC INSTITUTE, Troy, N.Y.; E. John Winhold; Versatile Nuclear Coincidence Apparatus for Undergraduate Use; 1 year; \$12,150

RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; William M. Harlow, Syracuse; A Motion Picture on the Mechanism of Moisture Movement in Wood; 9 months; \$2,300

UNION COLLEGE & UNIVERSITY, Schenectady, N.Y.; J. Modrey; Development of Micro-Pneumatic Breadboard; 3 months \$5,635 University of Arkansas, Fayetteville; Denys O. Akhurst; Development of Lecture Demonstration Equipment for Courses in the Theory of Electromagnetic Fields and Waves; 2 years; \$16,060

UNIVERSITY OF CALIFORNIA, Berkeley; John E. Dorn, Earl R. Parker and Jack Washburn; Development of Lecture Demonstration Equipment for Materials Science Course for Engineers; 1 year; \$14,030

Robert F. Helzer; Preparation of a

Robert F. Helzer; Preparation of a Sound-Color Film on the Olmec Site in Mexico; 1 year; \$23,110

E. F. King and R. C. Mackey; Development of Solid-State Pulse-Code Modulation System for Laboratory Study and Demonstration; 2 years; \$21,505

Robert Macey and Lester Packer; Development of Equipment for Monitoring Physiological Parameters in the Student Laboratory; 2 years; \$31,330

tory; 2 years; \$31,330

Frank A. Pitelka; The Production of a Sound-Color Film on Predator-Prey Relationships; 6 months; \$6,600

Norman N. Goldstein, Jr., Sir Francis Drake High School, San Anselmo; Development of Instruments for the Study of Physiological Phenomena in Advanced Secondary Biology; 1 year; \$25,145

UNIVERSITY OF COLORADO, Boulder; Malcolm Correll and Albert A. Bartlett; Development of Student Apparatus for Measuring Relativistic Change of Mass and Momentum Spectra of Electrons from Beta Ray Sources; 1 year; \$14,180

UNIVERSITY OF DELAWARE, Newark; Carl N. Shuster, Jr.; Development and Adaptation of Plastic-Embedding Techniques to Aid Students in the Three-Dimensional Visualization of Animal Anatomy; 18 months; \$8,900 UNIVERSITY OF ILLINOIS, Urbana; William L. Everitt; A Conference on Motion Pictures for Instruction in Electrical Engineering; 1 year; \$23,750

UNIVERSITY OF KANSAS, Lawrence; Kenneth E. Rose; Development of Demonstrations by Microscopy as Teaching Aids in the Science of Solids; 2 years; \$15,110

UNIVERSITY OF MIAMI, Coral Gables, Fla.; Thorne Shipley, Bascom Palmer Eye Institute, Miami; Development of Student Laboratory Equipment in Visual Sciences; 3 years; \$19,670

UNIVERSITY OF MICHIGAN, Ann Arbor; Joseph E. Shigley; Development of Laboratory Equipment for Teaching Dynamic Analysis; 1 year; \$4,590

UNIVERSITY OF MINNESOTA, Minneapolis; Donald E. Olson; Development of the Use of Semiconductor Particle Detectors in Magnetic Deflection Beta Particle Spectrometers; 1 year; \$1,460

UNIVERSITY OF MISSOURI, Columbia; John F. Lamb and James R. Tudor; Development of Experimental Equipments for Shoving Forces Exerted on Current Carrying Conductors in Magnetic Fields Near Iron Surfaces; 15 months; \$29,980

UNIVERSITY OF NEW MEXICO, Albuquerque; Richard K. Moore; Development of Kit-Style Digital Computers for Construction and Use by the Students at the High School Level; 1 year; \$17,650

University of Rochester, Rochester, N.Y.; Robert E. Hopkins and M. Parker Givens;

Interference Studies With the Optical Laboratory Experiments in Physiology":

Maser; 1 year; \$8,870 H. B. Voelcker, Jr.; Development of Apparatus and Experiments for a Modern Communications Laboratory; 2 years; \$50,200

UNIVERSITY OF TEXAS, Austin; W. C. Gardiner, Jr.; Development of a Nuclear Magnetic Resonance Spectrometer for Instructional Purposes; 2 years; \$4,025

UNIVERSITY OF UTAH, Salt Lake City; Edward M. Eyring; Development of a Pressure-Jump Apparatus to Illustrate Relaxation Methods of Measuring Rates of Rapid Reactions in Solution; 1 year; \$4,730

VANDERBILT UNIVERSITY, Nashville, Tenn.; Karl B. Schnelle, Jr.; Development of Equipment to Illustrate Mass Transfer and Reactor Dynamics and the Dynamic Testing of Chemical Process Systems; 15 months; \$11,790

WALDEMAR MEDICAL RESEARCH FOUNDATION, Inc., Port Washington, N.Y.; Norman Molomut; Design and Development of Individual Kits for Student Use in High School Biology and Chemistry Laboratory: 2 years: \$10.410 WASHINGTON STATE UNIVERSITY, Pullman; Charles F. Morrison, Jr.; Development of a General Utility Analytical Chemical Instrument; 1 year; \$8,090

WESTERN RESERVE University, Cleveland, Ohio; Ralph H. Petrucci; Development of Three Dimensional Models in Phase Rule Studies; 2 years; \$10,030

YESHIVA UNIVERSITY, New York, N.Y.; Roman Vishniac; Living Biology, Film Series; 21 months: \$143.050

## SUPPLEMENTARY TRAINING FOR TEACHERS

AMERICAN SOCIETY FOR ENGINEERING EDU-CATION, Newark, N.J.; Lloyd Berg, Montana State College; Supplementary Training for Science Teachers Program Entitled Entitled "Summer School for Chemical Engineering Teachers"; 6 days; \$22,040

BELOIT COLLEGE, Beloit, Wis.; Edward C. Fuller; Teaching a Course Combining Introductory Chemistry and Physics; months; \$10,380

CORNELL UNIVERSITY, Ithaca, N.Y.; Lyman G. Parratt : Project Conference in Relativity in College Physics; 3 weeks; \$52,770

DUKE UNIVERSITY, Durham, N.C.; J. J. Gergen; Experimental Program in the Retraining of Armed Service Officers for Teaching Mathematics; \$11,300

FISK UNIVERSITY, Nashville, Tenn.; Nelson Fuson; Thirteenth Annual Fisk University Infrared Spectroscopy Institute; 11 days; \$9.170

MATHEMATICAL ASSOCIATION OF AMERICA, Buffalo, N.Y.; Cletus O. Oakley, Haverford College; Program of Visiting Lectures to Secondary Schools; 2 years; \$100,000

MICHIGAN STATE UNIVERSITY, East Lansing; Wayne Taylor; Supplementary Training for Science Teachers Program; 4 weeks; \$21,200

NEW YORK STATE SOCIETY FOR MEDICAL RE-SEARCH, New York, N.Y.; Harold A. Levey, State University of New York: Supplementary Training for Science Teachers Program Entitled "Modern Aspects of Biology: burgh, Pa.; Everard M. Williams; \$14,625

6 weeks: \$17.875

NORTHWESTERN UNIVERSITY, Evanston, Ill.: Ronald R. Novales; A Study of Lens Regeneration in the Eyes of Salamanders; 2 years; \$2,860

RENSSELAER POLYTECHNIC INSTITUTE, Troy, N.Y.; Stephen E. Wiberley; Summer Institute in Instrumental Methods of Analysis; 8 weeks; \$22,170

STANFORD UNIVERSITY. Stanford. Calif.: Lawrence Blinks, Pacific Grove; Supplementary Training for Science Teachers Program; 10 weeks; \$23,680

TAU BETA PI ASSOCIATION, INC., Knoxville, Tenn.; Robert H. Nagel; A Compilation of Financial Aid for Graduate Study in Engineering; 1 year; \$2,000

UNIVERSITY OF COLORADO, Boulder; James R. Wailes: Summer Institute for Science Supervisors; 3 weeks; \$14,940

University of Dayton, Dayton, Ohio; Carl I. Michaelis; Supplementary Training for Science Teachers Program; 11 months; \$3.020

UNIVERSITY OF MIAMI, Coral Gables, Fla.; Carl H. Oppenheimer, Miami; Supplementary Training for Science Teachers Program in Marine Microbiology; 6 weeks; \$15,910 University of Nebraska, Lincoln; Harold G. Beenken; The Role of Bio-Medical Enginering in Universities and Hospitals; 5 months; \$7,970

University of South Florida, Tampa; T. C. Helvey; Second Southeastern Conference on Aero-Space Sciences for High School Physics Teachers; 13 days; \$16,270

University of Texas, Austin; Harold J. Plass, Jr.; Development of Teachers of Engineering Mechanics; 1 year; \$16,700

Wellesley, Wellesley College, Wellesley, Mass.; Delaphine G. R. Wyckoff; Intensive Study Session for High School Teachers of Biology; 10 days: \$8.620

WESTERN ILLINOIS UNIVERSITY, Macomb; Eugene Pergament; Summer Science Training Program for Secondary School Students; \$400

# SUPPLEMENTARY TRAINING FOR UNDER-GRADUATES

ASSOCIATED COLLEGE OF THE MIDWEST, Chicago, Ill.; Blair Stewart; Supplementary Training for Undergraduates; 31/2 years; \$46.830

# TRAVELING SCIENCE LIBRARIES

AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; Hilary J. Deason; Traveling Elementary School Science Library: 18 months: \$86.900

OAK RIDGE INSTITUTE OF NUCLEAR STUDIES, Inc., Oak Ridge Tenn.; W. W. Grigorieff; Special Institute for Future Science Teachers; 1 year; \$10,800

# UNDERGRADUATE RESEARCH PARTICIPATION

AMERICAN MUSEUM OF NATURAL HISTORY, New York, N.Y.; Evelyn Shaw; \$1,957 CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsson Kegeles; \$6,785

LAFAYETTE COLLEGE, Easton, Pa.; William F. Hart; \$690

MICHIGAN STATE UNIVERSITY, East Lansing; Erwin J. Benne; \$9,050

OBERLIN COLLEGE, Oberlin, Ohio; Norman C. Craig; \$690

OHIO WESLEYAN UNIVERSITY, Delaware; Arthur C. Breyer; \$5,645

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio: Gerald Tauber; \$4,760

## UNDERGRADUATE INSTRUCTIONAL SCIEN-TIFIC EQUIPMENT PROGRAM

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; David W. Rosberg; 2 years; \$19,140

ALABAMA AGRICULTURAL AND MECHANICAL COLLEGE, Normal; Mildred S. Robertson; 2 years; \$18,380

ALABAMA COLLEGE, Montevallo; Daniel R. McMillan; 2 years; \$24,550

ALAMEDA COUNTY STATE COLLEGE FOUNDA-TION, Hayward, Calif.; Thomas H. Southard; 2 years; \$25,000

ALBERTUS MAGNUS COLLEGE, New Haven, Conn.; Dorothea Rudnick; 2 years; \$4,500

Albion College, Albion, Mich.; William J. Gilbert; 2 years; \$5,440

ALVERNO COLLEGE, Milwaukee, Wis.; M. Bernarda Handrup; 2 years; \$1,000 AMERICAN UNIVERSITY, Washington, D.C.;

A. B. Chaet; 2 years; \$21,940 AMHERST COLLEGE, Amherst, Mass.; Bruce

B. Benson; 2 years; \$14,130

ANTIOCH COLLEGE, Yellow Springs, Ohio; C. Vernon Cannon ; 2 years ; \$12,800

ARIZONA STATE UNIVERSITY, Tempe; George

C. Beakley; 2 years; \$12,600 Alan T. Wager; 2 years; \$24,990

AUGSBURG COLLEGE AND THEOLOGICAL SEMI-NARY, Minneapolis, Minn.; Courtland L. Agre; 2 years; \$5,840

AUGUSTANA COLLEGE, Rock Island, Ill.; E. R. Erickson; 2 years; \$9,570

AUGUSTANA COLLEGE, Sloux Falls, S.D.; Robert Roy Kintner; 2 years; \$3,000

BARD COLLEGE, Annandale-on-Hudson, N.Y.; Henry Kritzler; 2 years; \$3,780

BARNARD COLLEGE, COLUMBIA UNIVERSITY, New York, N.Y.; Edward J. King; 2 years; \$7,560

BELLARMINE COLLEGE, Louisville, Ky.; Richard W. Sames; 2 years; \$12,800

BETHANY COLLEGE, Bethany, W. Va.; John Daniel Draper; 2 years; \$9,950

BIRMINGHAM-SOUTHERN COLLEGE, Birmingham, Ala.; Thomas J. Carrington; 2 years; \$3,250

BOSTON UNIVERSITY, Boston, Mass.; Lowell V. Coulter: 2 years; \$18,030

Bowdoin College, Brunswick, Maine; Noel C. Little; 2 years; \$5,000

BROOKLYN COLLEGE, Brooklyn, N.Y.; George Gibson; 2 years; \$2,770

Carroll W. Grant; 2 years; \$7,830 B. Kurrelmeyer; 2 years; \$1,470 Wilbur G. Valentine; 2 years; \$3,220

CLARK UNIVERSITY, Worcester, Mass.; Ger- | Brown University, Providence, R.I.; George L. Church; 2 years; \$11,730M. V. Edds, Jr.; 2 years; \$24,590

BRYN MAWR COLLEGE, Bryn Mawr, Pa.; Ernst Berliner; 2 years; \$12,340 BUCKNELL UNIVERSITY, Lewisburg, Pa.; Roy

C. Tasker; 2 years; \$24,740 BUTLER UNIVERSITY, Indianapolis, Ind.: Keith M. Seymour; 2 years; \$3,000

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena; Ward Whaling; 2 years; \$13,490

CARLETON COLLEGE, Northfield, Minn.; Kenneth O. May; 2 years; \$23,150

CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Robert B. Carlin; 2 years; \$25,000

Emerson M. Pugh; 2 years; \$24,920 CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; R. H. Thomas; 2 years; \$24,950 R. H. Thomas; 2 years; \$24,930

CITY COLLEGE, New York, N.Y., Leonard P.

Sayles; 2 years; \$24,890 Henry Semat; 2 years; \$16,550 Henry Semat; 2 years; \$24,680

CLARK UNIVERSITY, Worcester, Mass., Gerson Kegeles; 2 years; \$8,310

COKER COLLEGE, Hartsville, S.C.; Joseph B.

Harris; 2 years; \$3,960 COLBY COLLEGE, Waterville, Maine; Evans

B. Reid; 2 years; \$5,310 COLLEGE OF THE HOLY CROSS, Worcester, Mass.; John W. Flavin; 2 years; \$8,200

COLLEGE OF IDAHO, Caldwell, Lyle M. Stanford; 2 years; \$4,930

COLLEGE OF MOUNT ST. VINCENT, New York, N.Y.; Thomas F. Shea; 2 years; \$10,830 COLLEGE OF WILLIAM AND MARY, Williamsburg, Va.; Mitchell A. Byrd; 2 years;

\$10,000 COLORADO COLLEGE, Colorado Springs; Wilbur H. Wright; 2 years; \$24,500

COLORADO SCHOOL OF MINES, Golden; L. W. LeRoy; 2 years; \$790

COLORADO STATE UNIVERSITY RESEARCH FOUNDATION. Fort Collins; Louis R. Weber; 2 years; \$18,000

COLUMBIA UNIVERSITY, New York, N.Y.; Charles O. Beckmann; 2 years; \$12,080 Guy S. Longobardo; 2 years; \$24,780

COOPER UNION, New York, N.Y.; William C. Shapiro; 2 years; \$21,430

CORNELL COLLEGE, Mount Vernon, Iowa; Earl Scott; 2 years; \$6,700

CORNELL UNIVERSITY, Ithaca, N.Y.; R. B. Reeves; 2 years; \$12,160 H. A. Scheraga; 2 years; \$24,950

A. M. Srb; 2 years; \$17,500

DARTMOUTH COLLEGE, Hanover, N.H.; Robert W. Decker; 2 years; \$10,230

William T. Doyle; 2 years; \$12,000 Miles V. Hayes; 2 years; \$10,000

DENISON UNIVERSITY, Granville, Ohio; Paul T. Mountjoy; 2 years; \$10,560

DEPAUL UNIVERSITY, Chicago, Ill., Edwin J. Schillinger; 2 years; \$12,100

DEPAUW UNIVERSITY, Greencastle, Ind.; Clinton Gass; 2 years; \$19,480

John A. Ricketts; 2 years; \$6,200

DOANE COLLEGE, Crete, Nebr.; Robert C. Makosky; 2 years; \$4,880

DREW UNIVERSITY, Madison, N.J.; Donald A. Scott; 2 years; \$11,900 DREXEL INSTITUTE OF TECHNOLOGY, Philadelphia, Pa.; Narindra Nath Puri; 2 years; \$25,000 DRURY COLLEGE, Springfield, Mo.; Lora Bond; 2 years; \$5,570 DUKE UNIVERSITY, Durham, N.C.; J. H. Saylor; 2 years; \$7,490 Walter J. Seeley; 2 years; \$3,820 Karl E. Zener; 2 years; \$12,260 DUQUESNE UNIVERSITY, Pittsburgh, Pa.; Kurt C. Schreiber; 2 years; \$4,510 EARLHAM COLLEGE, Richmond, Ind.; Carrolle A. Markle; 2 years; \$6,040 EAST CENTRAL STATE COLLEGE, Ada, Okla.; Oscar L. Parker; 2 years; \$9,330 EASTERN ILLINOIS UNIVERSITY, Charleston; Glenn Q. Lefler; 2 years; \$5,000 EASTERN MICHIGAN UNIVERSITY, Ypsilanti; Albert W. Brown; 2 years; \$19,640 ELMIRA COLLEGE, Elmira, N.Y.; Richard R. Bond; 2 years; \$24,380 EMORY UNIVERSITY, Atlanta, Ga.; R. A. Day, Jr., 2 years; \$25,000 FAIRFIELD UNIVERSITY, Fairfield, C Robert E. Varnerin; 2 years; \$21,890 Conn.; FLORIDA STATE UNIVERSITY, Tallahassee; Leland Shanor; 2 years; \$24,790 FISK UNIVERSITY, Nashville, Tenn.; Irvin W. Elliott; 2 years; \$9,480 GEORGE WASHINGTON UNIVERSITY, Washington, D.C.; Russell B. Stevens; 2 years; \$5,170 GEORGETOWN UNIVERSITY, Washington, D.C.; William T. Taylor; 2 years; \$25,000 GEORGIA ISTITUTE OF TECHOLOGY, Atlanta: J. P. Vidosic; 2 years; \$25,000 GOUCHER COLLEGE, Baltimore, Md.; Dorothy L. Bernstein; 2 years; \$20,500 HAMLINE UNIVERSITY, St. Paul, Minn.; Kent H. Bracewell; 2 years; \$2,500 HAMPDEN-SYDNEY COLLEGE, Hampden-Sydney, Va.; G. Tyler Miller, Jr.; 2 years; HANOVER COLLEGE, Hanover, Ind.; Richard L. Conklin; 2 years; \$2,210 HARVARD UNIVERSITY, Cambridge, Mass.; R. W. Hickman; 2 years; \$20,050 Alan V. Jopling; 2 years; \$3,780 Ronald E. Vanelli; 2 years; \$17,850 HARVEY MUDD COLLEGE, Claremont, Calif.; Warren E. Wilson; 2 years; \$25,000 HASTINGS COLLEGE, Hastings, Nebr.; Clyde C. Sachtleben; 2 years; \$4,760 HAVERFORD COLLEGE, Haverford, Pa.; Fay Ajzenberg-Selove; 2 years; \$10,090 HOFSTRA COLLEGE, Hempstead, N.Y.; Harold E. Clearman; 2 years; \$6,130 HOOD COLLEGE, Frederick, Md.; Jane D. McCarrell; 2 years; \$5,000 HOWARD UNIVERSITY, Washington, Moddie D. Taylor; 2 years; \$24,790 HUNTER COLLEGE, New York, N.Y.; Jewell Hughes Bushey; 2 years; \$20,350 ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Leslie R. Hedrick; 2 years; \$6,180 ILLINOIS STATE NORMAL UNIVERSITY, Normal; R. E. Dilks; 2 years; \$10,000

INDIANA UNIVERSITY, Bloomington, John B. Patton; 2 years; \$25,000 IOWA STATE UNIVERSITY, Ames; Oscar E. Tauber; 2 years; \$10,440 JOHN CARROLL UNIVERSITY, Cleveland, Ohio: Richard J. Gaul; 2 years; \$13,930 KANSAS STATE UNIVERSITY, Manhattan; Ralph G. Nevins; 2 years; \$13,130 KANSAS WESLEYAN UNIVERSITY. Charles B. Creager; 2 years; \$6,500 King's College, Wilkes-Barre, Pa.; Jay A. Young; 2 years; \$12,000 KNOX COLLEGE, Galesburg, Ill.; Leland Harris; 2 years; \$25,000 LAKE FOREST COLLEGE, Lake Forest, Ill.; Harald C. Jensen; 2 years; \$23,000 LAWRENCE COLLEGE, Appleton, Wis.; Olga A. Smith; 2 years; \$10,720 LEBANON VALLEY COLLEGE, Annville, Pa.; Howard A. Neidig; 2 years; \$7,200 LEHIGH UNIVERSITY, Bethlehem, Pa.; George R. Jenkins; 2 years; \$24,420 LEMOYNE COLLEGE, Memphis, Tenn.; W. W. Gibson; 2 years; \$9,330 LORAS COLLEGE, Dubuque, Iowa; Donald R. Hutchinson; 2 years; \$4,210 LOS ANGELES STATE COLLEGE, LOS Angeles, Calif.; Harry C. Coffin; 2 years; \$6,020 LOUISIANA STATE UNIVERSITY, Baton Rouge; Hulen B. Williams; 2 years; \$24,710 Donald G. Davis, New Orleans; 2 years; \$13,720 LOYOLA UNIVERSITY, Chicago, Ill.; Walter Peters; 2 years; \$12,500 LUTHER COLLEGE, Decorah, Iowa; David T. Nelson; 2 years; \$13,690 MACALESTER COLLEGE, St. Paul, Minn.; C. H. Shiflett; 2 years; \$22,290 MANCHESTER COLLEGE, North Manchester, Ind.; Harry R. Weimer; 2 years; \$2,550 MANHATTAN COLLEGE, New York, N.Y.; C. Albert Welsh; 2 years; \$15,000 MARQUETTE UNIVERSITY, Milwaukee, Wis.; Arthur C. Moeller; 2 years; \$25,000 MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; Charles L. Miller; 2 years; \$24,-700 H. G. Stever; 2 years; \$24,920 MERRIMACK COLLEGE, North Andover, Mass.; Charles O. Ahonen; 2 years; \$11,410 MICHIGAN COLLEGE OF MINING & TECH-NOLOGY, Houghton; Marriott W. Bredekamp; 2 years; \$2,830 MICHIGAN STATE UNIVERSITY, East Lansing; Herman E. Koenig; 2 years; \$24,080 MILLSAPS COLLEGE, Jackson, Miss.; J. B. Price; 2 years; \$6,160 MISSISSIPPI SOUTHERN COLLEGE, Hattlesburg; J. Fred Walker; 2 years; \$12,500 MISSISSIPPI STATE UNIVERSITY, State College; E. Irl Howell; 2 years; \$24,770 MONMOUTH COLLEGE, Monmouth, Ill.; Garrett W. Thiessen; 2 years; \$6,000 MONTANA STATE COLLEGE, Bozeman; Irving E. Dayton; 2 years; \$25,000 MONTANA STATE UNIVERSITY, Missoula; Arthur E. Livingston; 2 years; \$22,640 John M. Stewart; 2 years; \$2,990

MOREHOUSE COLLEGE, Atlanta, Ga.; James ! H. Birnle; 2 years; \$22,950 Md.; MORGAN STATE COLLEGE, Baltimore. George H. Spaulding; 2 years; \$10,370 MOUNT HOLYOKE COLLEGE, South Hadley, Mass.: Anna J. Harrison; 2 years; \$20,800 MUSKINGUM COLLEGE, New Concord, Ohio; Simon J. Vellenga; 2 years; \$8,650 NEBRASKA WESLEYAN UNIVERSITY, Lincoln; Walter R. French, Jr.; 2 years; \$25,000 NEW MEXICO HIGHLANDS UNIVERSITY. Las Vegas; R. A. Deering; 2 years; \$21,240 NEW MEXICO STATE UNIVERSITY, University Park; Marlowe G. Anderson; 2 years; \$25,000 NEW YORK UNIVERSITY, New York; Lawrence A. Bornstein; 2 years; \$25,000 NORTH DAKOTA STATE UNIVERSITY, Fargo; Earl A. Helgeson; 2 years; \$5,150 NORTH GEORGIA COLLEGE, Dahlonega; J. C. Simms; 2 years; \$2,500 NORTHBASTERN UNIVERSITY, Boston, Mass.; M. W. Essigmann; 2 years; \$25,000 Reginald G. Lacount; 2 years; \$24,840 NORTHERN ILLINOIS UNIVERSITY, De Kalb; Michael J. Joncich; 2 years; \$10,000 NOBTHWESTERN STATE COLLEGE, Natchitoches, La.; George H. Ware; 2 years; \$7,210 NORTHWESTERN UNIVERSITY, Evanston, Ill.; William A. Hunt; 2 years; \$13,930 Allen S. Hussey; 2 years; \$25,000 OBERLIN COLLEGE, Oberlin, Ohio; Carl E. Howe; 2 years; \$16,290 Ralph H. Turner; 2 years; \$12,380 OHIO STATE UNIVERSITY, Columbus; Alfred B. Garrett; 2 years; \$24,770 Roy F. Reeves; 2 years; \$24,990 OHIO WESLEYAN UNIVERSITY, Delaware; Roy G. Bossert; 2 years; \$8,570 Elwood B. Shirling; 2 years; \$9,620 OKLAHOMA BAPTIST UNIVERSITY, Shawnee: J. O. Purdue; 2 years; \$5,520 OKLAHOMA STATE UNIVERSITY, Stillwater; Paul A. McCollum; 2 years; \$24,940 OBEGON STATE UNIVERSITY, Corvallis; Donald G. Humphrey; 2 years; \$9,940 E. A. Yunker; 2 years; \$21,740 OTTAWA UNIVERSITY, Ottawa, Kans.; W. D. Bemmels; 2 years; \$2,030 OTTERBEIN COLLEGE, Westerville, Ohio; Paul Matthews; 2 years; \$4,000 Tacoma, PACIFIC LUTHERAN UNIVERSITY, Wash.; Charles D. Anderson; 2 years; \$13,070 PACIFIC UNION COLLEGE, Angwin, Calif.; A. V. Winn; 2 years; \$17,510 Pennsylvania State University, University Park; William M. Lepley; 2 years; \$6,100 Richard G. Stoner; 2 years; \$25,000 POLYTECHNIC INSTITUTE OF BROOKLYN, Brooklyn, N.Y.; J.J. Dropkin; 2 years; \$21,870 POMONA COLLEGE, Claremont, Calif.; R. Nelson Smith; 2 years; \$25,000

PRINCETON UNIVERSITY, Princeton, N.J.: Walter Kauzmann; 2 years; \$3,440 PURDUE UNIVERSITY, Lafayette, Ind.; Raymond Cohen; 2 years; \$25,000 J. R. Eaton; 2 years; \$25,000 J. C. Rogler; 2 years; \$24,970 I. Walerstein; 2 years; \$22,800 RANDOLPH-MACON COLLEGE, Ashland, Va.; Bruce V. English; 2 years; \$7,440 RANDOLPH-MACON WOMAN'S COLLEGE, Lynchburg. Va.: A. Marquerite Risley; 2 years; \$2,470 REED COLLEGE, Portland, Oreg.; William L. Parker; 2 years; \$24,730 RENSSELAER POLYTECHNIC INSTITUTE, Troy. N.Y.; P. M. DeRusso; 2 years; \$5,990 H. B. Huntington; 2 years; \$24,350 Stephen E. Wiberley, 2 years; \$24,820 ROLLINS COLLEGE, Winter Park, Fla.; Herbert E. Hellwege; 2 years; \$23,160 ROSE POLYTECHNIC INSTITUTE, Terre Haute. Ind.; Charles C. Rogers; 2 years; \$22,830 ROSEMONT COLLEGE, Rosemont, Pa.; Mary Colman Wall; 2 years; \$5,450 RUTGERS, THE STATE UNIVERSITY, New Brunswick, N.J.; Donald J. Lewis; 2 years; \$24,650 Leslie A. Stauber; 2 years; \$4,880 Philip A. Vaughan; 2 years; \$15,000 ST. JOSEPH'S COLLEGE, Philadelphia, Pa.; John S. O'Conor; 2 years; \$25,000 ST. LAWRENCE UNIVERSITY, Canton, N.Y.; Edward N. Warner; 2 years; \$21,500 ST. LOUIS UNIVERSITY, St. Louis, Mo.; Lyman J. Wood; 2 years; \$25,000 ST. MARY'S COLLEGE, Winona, Minn.; Donald R. Morgan; 2 years; \$6,830 ST. MARY'S UNIVERSITY OF SAN ANTONIO, San Antonio, Tex.; William J. Hamm; 2 years; \$3,490 ST. NORBERT COLLEGE, West De Pere, Wis.; Lawrence L. Motiff; 2 years; \$3,850 ST. OLAF COLLEGE, Northfield, Minn.; Peter E. Fossum; 2 years; \$9,000 SHIMER COLLEGE, Mount Carroll, Ill.; J. Bennet Olson; 2 years; \$20,630 SIMPSON COLLEGE, Indianola, Iowa; Jack L. Carter; 2 years; \$9,210 SKIDMORE COLLEGE, Saratoga Springs, N.Y.; Edwin M. Moseley; 2 years; \$22,820 SOUTHERN METHODIST UNIVERSITY, Dallas Tex.; Howard J. Henry; 2 years; \$24,590 John A. Savage; 2 years; \$24,970 Southwestern at Memphis, Memphis, Tenn.; M. Foster Moose; 2 years; \$12,000 STANFORD UNIVERSITY, Stanford, Calif.; L. I. Schiff; 2 years; \$15,000
D. A. Skoog; 2 years; \$19,860 John K. Vennard, 2 years; \$6,350 STATE UNIVERSITY OF IOWA, Iowa City; Ralph L. Shriner; 2 years; \$16,180 STATE UNIVERSITY OF SOUTH DAKOTA, Vermillion; Charles M. Vaughn; 2 years; \$15,220 STEPHEN F. AUSTIN STATE COLLEGE, Nacogdoches, Tex.; J. Herndon Burr, Jr.; 2 years; PORTLAND STATE COLLEGE, Portland, Oreg.; \$15,000 STEVENS INSTITUTE OF TECHNOLOGY, Hoboken, N.J.; James H. Potter; 2 years;

Carter: 2 years; \$5,680

Mark Gurevitch; 2 years; \$25,000

PRESBYTERIAN COLLEGE. Clinton, S.C.; K. N.

\$25,000

STILLMAN COLLEGE, Tuscaloosa, Ala.: Wil-Ham H. Venable, Jr.; 2 years; \$4,000 SWARTHMORE COLLEGE, Swarthmore, F. Gilbert P. Haight, Jr.; 2 years; \$9,550. SYRACUSE UNIVERSITY, Syracuse, N.Y. Marshall W. Jennison; 2 years; \$21,410 Frederick G. Sherman; 2 years; \$24,230 Bernard D. Wood; 2 years; \$21,690 TAYLOR UNIVERSITY, Upland, Ind.; Elmer Nussbaum ; 2 years ; \$6,970 THIEL COLLEGE, Greenville, Pa.; Walter H. Puterbaugh; 2 years; \$1,900 TUFTS UNIVERSITY, Medford, Mass.; Ashley S. Campbell; 2 years; \$13,360 M. Kent Wilson; 2 years; \$7,320 TULANE UNIVERSITY, New Orleans, La.; Hans B. Jonassen; 2 years; \$22,560 COLLEGE, Greenville, TUSCULUM Tenn.; Arnold Van Pelt; 2 years; \$4,550 TUSKEGEE INSTITUTE, Tuskegee, Ala.: Z. W. Dybezak; 2 years; \$25,000 Union College and University, Schenectady, N.Y.; Harold E. Way; 2 years; \$15,000 University of Alabama, University; Willard F. Gray; 2 years; \$25,000 University of Arizona, Tucson; John W. Harshbarger; 2 years; \$24,460 University of Arkansas, Fayetteville; Thomas B. Jefferson; 2 years; \$2,050 Samuel Siegel; 2 years; \$5,800 University of California, Berkeley; S. F. Cook; 2 years; \$9,000 Morgan Harris; 2 years; \$13,230 E. R. Hardwick, Los Angeles; 2 years; \$8,540 Austin H. Riesen, Riverside: 2 years: \$12,700 J. W. Cotton, Santa Barbara; 2 years; \$4,790 UNIVERSITY CINCINNATI. Cincinnati. OF Ohio; William A. Spoor; 2 years; \$25,000 UNIVERSITY OF COLORADO, Boulder; Malcolm Correll; 2 years; \$20,910 Frank Kreith; 2 years; \$25,000 University of Connecticut, Storrs; H. G. Hewitt; 2 years; \$24,580 UNIVERSITY OF DAYTON, Dayton, Ohio; Leonard Mann: 2 years: \$5,000 University of DELAWARE, Newark; James P. Hartnett; 2 years; \$25,000 G. Fred Somers; 2 years; \$24,710 University of Georgia, Athens; Vernon J. Hurst; 2 years; \$12,390 University of Hawaii, Honolulu; James C. Gilbert; 2 years; \$20,790 Paul J. Scheuer; 2 years; \$25,000 University of Houston, Houston, Tex.; Sara E. Huggins; 2 years; \$11,270 W. E. Wentworth; 2 years; \$8,270 University of Illinois, Urbana; G. M. Almy; 2 years; \$25,000 H. A. Laitinen; 2 years; \$25,000 University of Kansas, Lawrence: David Paretsky; 2 years; \$11,360 Frederick E. Samson, Jr.; 2 years; \$22,650 University of Kentucky, Lexington; Lyle R. Dawson; 2 years; \$24,690 University of Maine, Orono; John Beamesderfer; 2 years; \$24,830

Clarence E. Bennett: 2 years: \$13.880 B. R. Speicher; 2 years; \$9,530 UNIVERSITY OF MARYLAND, College Park; U. Van Wijk; 2 years; \$6,250 University of Massachusetts, Amherst; Lawrence M. Bartlett: 2 years: \$25,000 University of Michigan, Ann Arbor: Leigh C. Anderson; 2 years; \$8,980
K. L. Jones; 2 years; \$5,240 Thomas D. Rowe; 2 years; \$25,000 G. J. Van Wylen; 2 years; \$23,310 Edward L. Walker; 2 years; \$17,910 University of Minnesota, Minneapolis; Stanley Bruckenstein; 2 years; \$17,170 Alfred O. C. Nier; 2 years; \$23,570 Robert E. Sloan; 2 years; \$24,460 Armas W. Tamminen, Duluth; 2 years; University of Missouri, Columbia; Clinton H. Conaway; 2 years; \$12,240 Louis V. Holroyd; 2 years; \$20,580 Harold Q. Fuller, Rolla; 2 years; \$25,000 UNIVERSITY OF NEBRASKA, Lincoln; Russell C. Nelson; 2 years; \$13,580 University of Nevada, Reno; Paul F. Secord; 2 years: \$10.660 UNIVERSITY OF NEW HAMPSHIRE, Durham; R. E. Houston, Jr.; 2 years; \$13,840 University of New Mexico, Albuquerque: Ruben D. Kelly; 2 years; \$24,070 University of North Carolina, Chapel Hill: H. D. Crockford; 2 years; \$23,990 Edmund Berkeley, Greensboro: 2 years: Raymond L. Murray, Raleigh; 2 years; \$25,000 University of NORTH DAKOTA, Forks; George C. Wheeler; 2 years; \$10,000 UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Clyde H. Hoffman; 2 years; \$10,560 Frederick D. Rossini; 2 years; \$6,650 University of Oklahoma, Norman; Howard W. Larsh; 2 years; \$25,000 C. A. Plint; 2 years; \$8,120 University of Oregon, Eugene: F. J. Reithel; 2 years; \$12,940 University of Pennsylvania, Philadelphia; Charles C. Price; 2 years; \$12,650 UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; T. H. Dunkelberger; 2 years; \$25,000 University of Puerto Rico, Rio Piedras; Gustavo Candelas; 2 years; \$24,610 University of Puerto Rico, Mayaguez; J. Maldonado Capriles; 2 years; \$2,830 University of Redlands, Redlands, Calif.; Charles D. Howell; 2 years; \$21,720 University of Rochester, Rochester, N.Y.: M. F. Kaplon; 2 years; \$24,340 Winston D. Walters; 2 years; \$10,560 UNIVERSITY OF ST. THOMAS, Houston, Tex.: George H. Dubay; 2 years; \$10,000 University of Santa Clara, Santa Clara, Calif.; John B. Drahmann; 2 years; \$4,960 University of Scranton, Scranton, Pa.; Joseph P. Harper; 2 years; \$21,580 University of South Carolina, Columbia; B. L. Baker; 2 years; \$15,860 University of Southern California, Los Thomas Angeles; Clements; 2 years: \$20,440

John R. Holmes; 2 years; \$24,940

WILLIAM MARSH RICE UNIVERSITY, Houston, University of Tennessee, Knoxville; A. Tex., John A. S. Adams; 2 years; \$17,000 D. Melaven; 2 years; \$24,850 WILLIAMS COLLEGE, Williamstown, Mass.; University of Texas, Austin; William W. Richard O. Rouse, Jr.; 2 years; \$8,550 Hagerty; 2 years; \$21,860 WISCONSIN STATE COLLEGE, La Crosse; Mil-UNIVERSITY OF TOLEDO, Toledo, Ohio; Robford A. Cowley; 2 years; \$5,370 ert A. Chipman; 2 years; \$25,000 WISCONSIN STATE COLLEGE, Stevens Point; UNIVERSITY OF UTAH, Salt Lake City; Grant R. Fowles; 2 years; \$14,920 Monica E. Bainter; 2 years; \$4,950 L. Dale Harris ; 2 years ; \$17,220 WISCONSIN STATE COLLEGE, Superior; Phil-Don M. Rees; 2 years; \$23,840 lip R. Brieske; 2 years; \$4,950 UNIVERSITY OF VERMONT, Burlington; Clin-Whitewater; WISCONSIN STATE COLLEGE, ton D. Cook; 2 years; \$24,240 Rudolph Prucha; 2 years; \$4,400 Paul A. Moody; 2 years; \$24,590 YALE UNIVERSITY, New Haven, Conn.; Hor-UNIVERSITY OF VIRGINIA, Charlottesville; ace D. Taft; 2 years; \$21,680 Dietrich Bodenstein; 2 years; \$24,990 UNDERGRADUATE SCIENCE EDUCATION PRO-John P. Raney; 2 years; \$11,500 UNIVERSITY OF WASHINGTON, Seattle; Frank J. Seiler; 2 years; \$24,220 AGRICULTURAL & MECHANICAL COLLEGE OF TEXAS, College Station; M. E. Bloodworth; UNIVERSITY OF WICHITA, Wichita, Kans.; 1 year; \$7,735 John P. German; 9 months; \$680 Alvin Sarachek; 2 years; \$4,100 University of Wisconsin, Madison; R. J. Harriott O. Kunkel; 23 months; \$11,155 Altpeter; 2 years; \$25,000 Donald H. Bucklin; 2 years; \$24,830 R. W. Mitchell; 3 months; \$5,935 AGRICULTURAL & TECHNICAL COLLEGE OF William C. Frazier; 2 years; \$23,840 NORTH CAROLINA, Greensboro; Donald A. Edwards; 1 year; \$4,310 Gladys W. Royal; 11 months; \$10,505 UNIVERSITY OF WYOMING, Laramie; L. Floyd Clarke; 2 years; \$24,730 VANDERBILT UNIVERSITY, Nashville, Tenn.; Montevallo; Paul C. ALABAMA COLLEGE. Robert T. Lagemann; 2 years; \$7,020 Bailey; 1 year; \$11,600 VASSAR COLLEGE, Poughkeepsie, N.Y.; R. E. ALFRED UNIVERSITY, Alfred, N.Y.; Robert M. Alley, Jr.; 2 years; \$8,250 Campbell; 3 months; \$6,350 VILLA MADONNA COLLEGE, Covington, I Wallace F. Humphreys; 2 years; \$4,360 ALLEGHENY COLLEGE, Meadville, Pa.; Georgiana W. Scovil; 1 year; \$4,890 VIRGINIA POLYTECHNIC INSTITUTE, Blacks-Alma, Mich.; Arlan L. ALMA COLLEGE, burg; Fred W. Bull; 2 years; \$19,880 Edgar; 1 year; \$6,965 James A. Jacobs ; 2 years ; \$8,000 AMHERST COLLEGE, Amherst, Mass.; Robert Robert C. Krug; 2 years; \$7,450 H. Koch; 2 months; \$1,135 VIRGINIA STATE COLLEGE, Petersburg; John ANTIOCH COLLEGE, Yellow Springs, Ohio; James S. Corwin; 1 year; \$11,960 T. Blue, Jr., Norfolk; 2 years; \$4,900 WAKE FOREST COLLEGE, Winston-Salem, ARLINGTON STATE COLLEGE, Arlington, Tex.; N.C.; John W. Sawyer; 2 years; \$25,000 Rayford L. Hoyle; 1 year; \$10,005 WASHINGTON STATE UNIVERSITY, Pullman; C. L. McNulty, Jr.; 3 months; \$2,240 ASSOCIATED UNIVERSITIES, INC., New York, N.Y.; John W. Findlay, National Radio B. Roger Ray; 2 years; \$13,840 WASHINGTON UNIVERSITY, St. Louis, Mo.; Richard A. Dammkoehler; 2 years; \$22,430 Astronomy Observatory, Green Bank, W. Viktor Hamburger; 2 years; \$5,540 Va.; 3 months; \$7,300 WAYNE STATE UNIVERSITY, Detroit, Mich.; AUBURN UNIVERSITY, Auburn, Ala.; W. S. William V. Mayer; 2 years; \$20,850 Bailey; 1 year; \$4,580 Howard Carr; 3 months; \$4,305 WELLS COLLEGE, Aurora, N.Y.; Robert L. William G. Sherling, Jr.; 1 year; \$10,150 Gering; 2 years; \$12,500 BARNARD COLLEGE, COLUMBIA UNIVERSITY, WESLEYAN UNIVERSITY, Middletown, Conn.; New York, N.Y.; Lucena J. Barth; 9 months; Vincent W. Cochrane; 2 years; \$19,940 \$2,345 WEST VIRGINIA UNIVERSITY, Morgantown; Emma Dietz Stecher; 4 months; \$3,910 C. D. Thomas ; 2 years ; \$4,130 BAYLOR UNIVERSITY, Waco, Tex.; Bryce C. WEST VIRGINIA WESLEYAN COLLEGE, Buck-Brown; 1 year; \$6,785 hannon; John C. Wright; 2 years; \$10,160 BELLARMINE COLLEGE, Louisville, Ky.; John Western Michigan University, Kalama-M. Daly; 3 months; \$3,425 zoo; Walter G. Marburger; 2 years; \$12,490 BOSTON COLLEGE, Chestnut Hill, Mass.; Wil-WESTERN RESERVE UNIVERSITY, Cleveland, liam Guindon; 3 months; \$3,220 Ohio; Howard A. Schneiderman; 2 years; Brunswick, BOWDOIN COLLEGE. Charles E. Huntington; 85 months; \$16,735 \$24.470 Myron A. Jeppesen; 1 year; \$3,450 Reinhard L. Korgen; 1 year; \$5,405 WHEELING COLLEGE, Wheeling, W. Va.; Joseph A. Duke ; 2 years ; \$12,000 BOWLING GREEN STATE UNIVERSITY, Bowling WHITMAN COLLEGE, Walla Walla, Wash.; Green, Ohio; W. H. Hall; 1 year; \$4,320 Charles C. Rich; 9 months; \$620 Arthur G. Rempel; 2 years; \$24,950 WILKES COLLEGE, Wilkes-Barre, Pa.; Charles BRANDEIS UNIVERSITY, Waltham, Mass.; Milton R. Baker; 1 year; \$3,680 B. Reif; 2 years; \$1,400 David A. Buchsbaum; 8 months; \$2,070

WILLAMETTE UNIVERSITY, Salem, Oreg.; Rob-

ert L. Purbrick; 2 years; \$5,100

Paul S. Dorain; 23 months; \$9,705

BROOKLYN COLLEGE, Brooklyn, N.Y.; Meyer | DARTMOUTH COLLEGE, Hanover, N.H.; Wil-Jordan; 1 year: \$12,880 BROWN UNIVERSITY, Providence, R.I.; John A. Dillon, Jr.; 11 months; \$3,625 Thomas A. Mutch; 3 months; \$2,610 John F. Neumer; 8 months; \$10,430 Harold Schlosberg; 1 year; \$11,685 BRYN MAWR COLLEGE, Bryn Mawr, Pa.; Ernst Berliner; 5 months; \$8,280 months; \$2,380 BUCKNELL UNIVERSITY, Lewisburg, Richard P. Nickelsen; 2 months; \$750 Meldrum B. Winstead; 8 months; \$6,175 BURBAU OF RESEARCH IN NEUROLOGY & PSY-CHIATRY, Princeton, N.J.; DeWitt H. Smith; 1 year; \$11,880 Arthur Sohler; 3 months; \$2,130 CANISIUS COLLEGE, Buffalo, N.Y.; Herman A. Szymanski; 3 months; \$5,980 CARDINAL STRITCH COLLEGE, Milwaukee. Wis.: Sister Mary John Baptist; 9 months; \$5,925 \$1,665 Minn.: COLLEGE. Northfield, CABLETON Frank C. Miller; 2 months; \$1,795 Robert A. Reitz; 2 months; \$3,115 CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Richard H. Lambert; 3 months; \$5.060 R. T. Schmacher; 3 months; \$4,015 CARROLL COLLEGE, Waukesha, Wis.; Richard Eugene Bayer; 23 months; \$12,015 CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; Robert C. Weast; 1 year; \$45,125 CATHOLIC UNIVERSITY, Washington, D.C.; George E. McDuffle, Jr.; 3 months; \$4,500 CHRISTIAN BROTHERS COLLEGE, Memphis, Tenn.; Edward Doody; 1 year; \$2,550 CITY COLLEGE, New York, N.Y.; Bennington P. Gill; 9 months; \$6,095 Mansour Javid; 1 year; \$8,685 months; \$840 CLARK UNIVERSITY, Worcester, Vernon Ahmadjian; 1 year; \$9,315 Mass.; Roy S. Anderson; 1 year; \$2,990 CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, N.Y.; Charles A. Howe; 1 year; \$8,680 Thomas J. Ward; 1 year; \$6,785 \$6,035 COLBY COLLEGE, Waterville, Maine; James L. Fozard; 9 months; \$2,590 Charles F. Hickox, Jr.; 1 year; \$1,950 COLGATE UNIVERSITY, Hamilton, N.Y.; Raymond J. Myers; 1 year; \$13,535 COLLEGE OF THE HOLY CROSS, Worcester, Mass.; Ram Sarup; 1 year; \$6,900 COLLEGE OF MOUNT ST. VINCENT, New York, \$4,775 N.Y.; Marguerite M. Caso; 9 months; \$3,300 COLORADO COLLEGE, Colorado Springs; Robert Z. Brown; 11 months; \$4,435 Milton K. Snyder; 1 year; \$5,060 COLORADO STATE UNIVERSITY, Fort Collins; Ralph Baker; 5 months; \$6,970 Edwin W. Mogren; 1 year; \$5,320 Summner M. Morrison; 23 months; \$17,065 Harry E. Troxell; 1 year; \$5,685 CORNELL COLLEGE, Mount Vernon, Iowa; Eugene E. Hinman; 11 months; \$1,145 T. Edwin Rogers; 9 months; \$1,095 CORNELL UNIVERSITY, Ithaca, N.Y.; N. C. Brady ; 1 year ; \$10,880 David H. Geske ; 5 months ; \$30,820 R. F. Holland; 1 year; \$7,040 George C. Kent; 5 months; \$14,710 \$20,265

liam P. Davis; 23 months; \$19,045 DEPAUL UNIVERSITY, Chicago, Ill.; Robert C. Miller; 23 months; \$15,805 DILLARD UNIVERSITY, New Orleans, La.; J. Hamer; 1 year; \$9,315 DREXEL INSTITUTE OF TECHNOLOGY, Philadelphia, Pa.; Francis K. Davis, Jr.; 9 DRURY COLLEGE, Springfield, Mo.; Jorge L. Padron; 1 year; \$5,020 DUKE UNIVERSITY, Durham, N.C.; Jack W. Brehm; 1 year; \$5,060 Earl I. Brown, II; 1 year; \$8,995 Edward C. Horn ; 1 year ; \$3,970 FAIRFIELD UNIVERSITY, Fairfield, Conn.; John E. Klimas, Jr.; 1 year; \$995 FAIRLEIGH DICKINSON UNIVERSITY, Rutherford, N.J.; Harold Weinberger; 3 months; FISK UNIVERSITY, Nashville, Tenn.; I. Wesley Elliott; 11 months; \$7,995 James R. Lawson; 1 year; \$5,735 SOUTHERN COLLEGE, Lakeland; Margaret L. Gilbert; 1 year; \$14,640 FLORIDA STATE UNIVERSITY, Tallahassee; Grover L. Rogers; 11 months; \$4,280 FORDHAM UNIVERSITY New York, Henry F. DeBaggis; 11 months; \$12,160 Joseph F. Mulligan; 3 months; \$9,600 Clarence C. Schubert : 1 year ; \$9,250 Franklin & Marshall College, Lancaster, Pa.; Frank D. Enck; 1 year; \$5,370 Fred H. Suydam; 8 months; \$17,250 Donald W. Western; 14 months; \$6,030 FREDERIC BURK FOUNDATION FOR EDUCATION, San Francisco, Calif.; Eva F. Estermann; 11 FURMAN UNIVERSITY, Greenville, S.C.; Donald G. Kubler; 1 year; \$6,385 GENEVA COLLEGE, Beaver Falls, Pa.; Roy M. Adams: 1 year: \$8,000 GEORGE WASHINGTON UNIVERSITY, Washington, D.C.; Russell B. Stevens; 35 months; Richard D. Walk; 1 year; \$7,000 GEORGIA INSTITUTE OF TECHNOLOGY, lanta; Edwin J. Scheibner; 1 year; \$4,080 GRINNELL COLLEGE, Grinnell, Iowa; Givens L. Thornton; 11 months; \$8,720 HAMPDEN-SYDNEY COLLEGE, Hampden-Sydney, Va.; G. Tyler Miller, Jr.; 8 months; HARVARD UNIVERSITY, Cambridge, Mass.; I. Bernard Cohen; 11 months; \$22,130 HARVARD UNIVERSITY, Cambridge, Mass.; George W. Goethals; 1 year; \$19,160 Jesse F. Scott; 5 months; \$42,550 Frank H. Westheimer; 3 months; \$41,360 Stephen Williams; 3 months; \$12,995 HARVEY MUDD COLLEGE, Claremont, Calif.; Robert C. James; 1 year; \$6,530 HAVERFORD COLLEGE, Haverford, Pa.; Louis C. Green; 14 months; \$1,775 HOWARD PAYNE COLLEGE, Brownwood, Tex.; Chris S. Jordon; 1 year; \$915 ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago; Peter Chiarulli; 3 months; \$3,380
Leonard I. Grossweiner; 23 months;

John R. Shaver: 1 year: \$20.125 Ralph M. Krause; 1 year; \$11,000 MICHIGAN STATE UNIVERSITY, Bast Lansing; IMMACULATE HEART COLLEGE, Los Angeles, Paul Tomboulian; 9 months; \$1,785 Calif.; Agnes A. Green; 3 months; \$6,900 MISSISSIPPI STATE UNIVERSITY, State College; Lyell C. Behr; 1 year; \$11,240 M. Gerald Shea; 1 year; \$5,230 INDIANA UNIVERSITY, Bloomington; H. W. Charles B. Cliett; 2 years; \$21,545 Hofstetter; 2 months; \$2,580 Leslie L. Ellis; 1 year; \$7,450 Paul Klinge; 11 months; \$2,920 Paul Klinge; 11 months; \$6,185 V. J. Shiner, Jr.; 22 months; \$31,740 Judson Mead; 1 year; \$5,805 MORBHOUSE COLLEGE, Atlanta, Ga.; James H. Birnie; 27 months; \$11,190 MORGAN STATE COLLEGE, Baltimore, Md.; IOWA STATE UNIVERSITY, Ames; T. A. Ban-Clarence F. Stephens; 1 year; \$6,555 croft; 1 year; \$8,000 MOUNT HOLYOKE COLLEGE, South Hadley. Kenneth D. Carlander; 1 year; \$9,090 Mass.; Grace E. Bates; 9 months; \$2,150 Paul A. Hartman; 1 year; \$8,565 George G. Karas; 1 year; \$3,925 Kathryn M. Eschenberg; 3 months; \$7,230 Edwin S. Weaver; 6 months; \$20,285 Don C. Norton; 1 year; \$7,530 MOUNT ST. MARY'S COLLEGE, Los Angeles, Peter A. Peterson; 3 months; \$3,255 Calif.: Hallie F. Bundy; 5 months; \$6,670 Malcolm A. Rougvie; 1 year; \$11,030 MOUNT ST. SCHOLASTICA COLLEGE, Atchison. Glen A. Russell; 35 months; \$37,820 Kans.; Helen Sullivan; 9 months; \$1,895 JACKSON STATE COLLEGE, Jackson, Miss.; Benjamin H. McLemore; 1 year; \$5,250 MUSKINGUM COLLEGE, New Concord, Ohio; Wilmer K. Fife; 1 year; \$3,195 JOHNS HOPKINS UNIVERSITY, Baltimore, NEW MEXICO INSTITUTE OF MINING & TECH-Md.; Walter S. Koski; 3 months; \$5,870 NOLOGY, Socorro; William Hume; 1 year; JUNIATA COLLEGE, Huntingdon, Pa.; David \$8,250 M. Hercules; 1 year; \$10,730 NEW MEXICO STATE UNIVERSITY, University KANSAS STATE COLLEGE OF PITTSBURG; Joe Park; James E. Weiss; 1 year; \$20,350 M. Walker; 11 months; \$9,225 NEW YORK STATE DEPARTMENT OF HEALTH, KANSAS STATE UNIVERSITY, Manhattan; M. Albany; Ray K. Brown; 3 months; \$4,340 F. Hansen; 3 months; \$4,125 NEW YORK UNIVERSITY, New York; Joseph Franz Samelson; 4 months; \$11,250 D. Gettler; 1 year; \$19,285 Leonard Yarmus; 5 months; \$12,510 UNIVERSITY, Salina; KANSAS WESLEYAN Charles B. Creager; 11 months; \$3,750 NORFOLK COLLEGE OF WILLIAM & MARY, Nor-KENTUCKY RESEARCH FOUNDATION, Lexingfolk, Va.; Jacques S. Zaneveld; 1 year; ton; Jacob R. Meadow; 1 year; \$12,855 \$5,690 King College, Bristol, Tenn.; Roy H. Bailey; 1 year; \$5,115 NORTH CENTRAL COLLEGE, Naperville, Ill.; Mary Anice Seybold; 11 months; \$2,480 King's College, Wilkes-Barre, Pa.; James NORTH DAKOTA STATE UNIVERSITY, Fargo; J. Sheehan; 3 months; \$3,675 John A. Callenbach; 1 year; \$20,815 LAKE FOREST COLLEGE, Lake Forest, Ill.; Donald Schwartz; 1 year; \$4,210 Charles D. Louch; 3 months; \$2,415 NORTH TEXAS STATE University, Denton: LEBANON VALLEY COLLEGE, Annville, Pa.; Robert C. Sherman ; 1 year ; \$25,900 Karl L. Lockwood; 3 months; \$9,515 NORTHEASTERN UNIVERSITY, Boston, Mass.; UNIVERSITY, Bethlehem. Robert A. Shepard; 3 months; \$8,190 Ralph A. Troupe; 3 months; \$4,835 Jerome Daen; 1 year; \$21,310 Everett Pitcher; 1 year; \$13,455 NORTHERN ILLINOIS UNIVERSITY, DeKalb: LORAS COLLEGE, Dubuque, Iowa; George N. Sidney Mittler; 23 months; \$25,500 Schulte; 1 year; \$6,020 NORTHWESTERN STATE COLLEGE OF LOUISI-Los Angeles, Calif.; Richard T. Keys; 1 ANA, Natchitoches; Alan H. Crosby; 11 months; \$3,500 Richard E. Garth; 20 months; \$14,600 year; \$10,580 LOUISIANA POLYTECHNIC INSTITUTE, Ruston; NORTHWESTERN UNIVERSITY, Evanston, Ill.; John J. McDow; 11 months; \$2,755 Richard C. Bowers; 3 months; \$15,075 Robert W. Hull; 1 year; \$13,765 LOUISIANA STATE UNIVERSITY, Baton Rouge; George C. Kent, Jr.; 14 months; \$9,370 Grover E. Murray; 5 months; \$14,190 OBERLIN COLLEGE, Oberlin, Ohio; Fred Foreman; 11 months; \$2,200 L. E. Steiner; 35 months; \$51,000 Vincent E. Parker; 5 months; \$14,640 LOYOLA UNIVERSITY, Chicago, Ill.; Robert B. Robert Weinstock; 2 months; \$1,885 Reisel; 9 months; \$4,645 OHIO STATE UNIVERSITY, Columbus; Frank L. Himes; 1 year; \$3,165 Lloyd M. Parks; 23 months; \$29,670 LOYOLA UNIVERSITY, New Orleans, La.; F. A. Benedetto; 34 months; \$34,155 MASSACHUSETTS INSTITUTE OF TECHNOLOGY, OHIO WESLEYAN UNIVERSITY, Delaware; Cambridge; Arthur C. Cope; 1 year; \$28,150 Robert W. Long; 20 months; \$2,195 OKLAHOMA STATE UNIVERSITY, Stillwater; McMubray College, Abilene, Tex.; Virgil Marlowe D. Thorne; 1 year; \$14,315 E. Bottom; 11 months; \$3,000 John W. West; 1 year; \$5,865 Leon H. Zalkow; 1 year; \$7,890 MICHIGAN COLLEGE OF MINING & TECH-NOLOGY, Houghton; M. E. Volin; 1 year; OREGON STATE UNIVERSITY, Corvallis; Fred W. Decker; 1 year; \$7,100 J. R. Dilworth; 23 months; \$18,985 MICHIGAN STATE UNIVERSITY, East Lansing;

John W. Andresen; 1 year; \$7,270

E. C. Gilbert; 5 months; \$18,865 Glenn W. Holcomb; 9 months; \$4,180 Leo A. Sciuchetti; 1 year; \$8,910 Roy A. Young; 8 months; \$24,840 PACIFIC LUTHERAN COLLEGE, Tacoma, Wash.; Charles D. Anderson; 1 year; \$7,650 PENNSYLVANIA STATE UNIVERSITY, University Park; Walter I. Goldburg; 1 year; \$7,640 Harold J. Read; 3 months; \$7,245 Robert W. Stone; 1 year; \$7,130 William O. Williamson; 3 months; \$1,150 POLYTECHNIC INSTITUTE OF BROOKLYN, Brooklyn, N.Y.; Ernest I. Becker; 3 years; \$42,415 John J. Dropkin; 23 months; \$37,760 Jules P. Russell; 1 year; \$31,010 POMONA COLLEGE, Claremont, Calif.; William D. Andrus; 1 year; \$39,035 PRINCETON UNIVERSITY, Princeton, N.J.; John G. Danielson; 3 months; \$28,610 PURDUE UNIVERSITY, Lafayette Ind.; Durward L. Allen; 1 year; \$6,975 Glenn B. Bergeson; 1 year; \$7,600 Gustav E. Cwalina; 1 year; \$5,535 George W. Hughes; 1 year; \$23,190 F. H. Wilt; 1 year; \$50,875 QUEENS COLLEGE, Flushing, N.Y.; Gregory Razran; 1 year; \$5,865 REED COLLEGE, Portland, Oreg.; Frederick D. Tabbutt; 1 year; \$12,605 RENSSELAER POLYTECHNIC INSTITUTE, Troy, N.Y.; Stephen E. Wiberley; 3 months; \$5,605 RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; Hugh E. Hunter, Binghamton; 11 months; \$7,255 Noel Simmons, Buffalo; 3 months; \$5,265 William T. Snyder, Oyster Bay; 1 year; \$12,250 Edward C. Jahn, Syracuse; 3 months; \$7.830 Ralph T. King, Syracuse; 3 months; \$4,265 RIPON COLLEGE, Ripon, Wis.; Jack W. Powers; 1 year; \$4,160 ROLLINS COLLEGE, Winter Park, Fla.; John S. Ross; 23 months; \$4,715 ROSEMONT COLLEGE, Rosemont, Pa.; Mary Colman Wall; 23 months; \$7,650 ROSWELL PARK MEMORIAL INSTITUTE, Buffalo, N.Y.; Edwin A. Mirand; 3 months; \$23,000 RUTGERS, THE STATE UNIVERSITY, New Brunswick, N.J.; James B. Durand, Camden; 9 months; \$635 Donald G. Forgays; 23 months; \$17,375 Bernard W. Koft; 2 months; \$1,915 SAVANNAH STATE COLLEGE, Savannah, Ga.; Charles Pratt; 1 year; \$3,200 ST. LAWRENCE UNIVERSITY, Canton, N.Y.; Gilbert E. Moos; 8 months; \$2,185 Charles H. Stauffer; 9 months; \$1,440 ST. MARY'S COLLEGE, Winona, Minn.; H. Charles; 23 months; \$15,480 H. Philip Hogan; 23 months; \$5,000 ST. OLAF COLLEGE, Northfield, Minn.; Paul R. Burton; 8 months; \$3,605 John C. Marshall; 1 year; \$7,765 Thomas Rossing; 9 months; \$1,840 SAN DIEGO STATE COLLEGE FOUNDATION, San Diego, Calif.; Burt Nelson; 1 year; \$5,050 Merle B. Turner; 1 year; \$8,625

Harold Walba; 1 year; \$21,475 SAN JOSE COLLEGE FOUNDATION, San Jose, Calif.; Lloyd Van Alten; 23 months; \$23,385 SEATTLE PACIFIC COLLEGE, Seattle, Wash.; Donald D. Kerlee; 3 months; \$4,255 SETON HALL UNIVERSITY, South Orange, N.J.; Alfred V. Celiano; 11 months; \$16,915 SMITH COLLEGE, Northampton, Mass.; Milton D. Soffer; 3 months; \$6,385 SOUTH DAKOTA SCHOOL OF MINES AND TECH-NoLogy, Rapid City; George Rapp, Jr.; 3 months: \$1.550 SOUTH DAKOTA STATE COLLEGE, Brookings; Lawrence O. Fine; 3 months; \$2,000 John Tanaka; 1 year; \$2,700 SOUTHERN ILLINOIS UNIVERSITY, Carbondale; William C. Ashby; 11 months; \$6,555 SOUTHERN OREGON COLLEGE, Ashland; Franklin W. Sturges; 1 year; \$10,510 SPRING HILL COLLEGE, Mobile, Ala.; Walter J. Rhein; 2 months; \$4,035 STANFORD UNIVERSITY, Stanford, Calif.; William R. Dickinson; 11 months; \$4,890 O. Cutler Shepard; 18 months; \$11,420 STATE UNIVERSITY OF IOWA, IOWA City; James O. Osburn; 1 year; \$7,240 Milton E. Rosenbaum; 3 months; \$5,405 STATE UNIVERSITY OF NEW YORK COLLEGE OF CERAMICS. ALFRED UNIVERSITY, Charles E. Greene; 1 year; \$6,500 STATE UNIVERSITY OF SOUTH DAKOTA, Vermillion; Roger T. Davis; 1 year; \$7,475 Theodore L. Reid; 2 months; \$4,440 STEPHEN F. AUSTIN STATE COLLEGE, Nacogdoches, Tex.; W. I. Layton; 9 months; \$745 STEVENS INSTITUTE OF TECHNOLOGY, boken, N.J.; Henry Polowy; 1 year; \$7,665 Rolf Weil; 1 year; \$5,405 SYRACUSE UNIVERSITY, Syracuse, N.Y.; Darshan S. Dosanjh; 1 year; \$7,705 Paul W. Gilbert ; 1 year ; \$9,895 Wilbur R. LePage; 13 months; \$8,475 James A. Luker; 1 year; \$13,150 Wallace R. McAllister; 1 year; \$7,000 William M. Merrill; 1 year; \$6,850 Henry E. Wirth; 23 months; \$30,980 TENNESSEE WESLEYAN COLLEGE, Athens; Carl Honaker; 1 year; \$3,280 SOUTHERN UNIVERSITY, TEYAS Houston: Robert J. Terry; 3 months; \$18,445 TEXAS WOMAN'S UNIVERSITY, Denton; William L. Mecay; 3 years; \$5,080 THIEL COLLEGE, Greenville, Pa.: Kenneth G. Wood; 1 year; \$2,935 TRINITY COLLEGE, Hartford, Conn.; Austin C. Herschberger; 1 year; \$4,760 TRINITY COLLEGE, Washington, D.C.; Marie Therese Dimond; 3 months; \$3,400 TULANE UNIVERSITY, New Orleans, La.; Hans B. Jonassen; 1 year; \$8,735 Vera T. Kanareff; 9 months; \$405 Union College and University, Schenectady, N.Y.; R. Rappaport; 23 months; \$14,260 University of Alabama, University; Margaret Green; 3 months; \$5,175 UNIVERSITY OF ALASKA, College; Allan H. Mick; 3 months; \$6,975 University of Arizona, Tucson; Henry Freiser; 1 year; \$7,130

UNIVERSITY OF MISSOURI, Columbia; Harold University of Fayetteville; | ARKANSAS, D. O. Akhurst; 1 year; \$4,970 Lowell F. Bailey; 1 year; \$5,695 Glen T. Clayton; 1 year; \$14,030 Arthur Fry ; 2 years ; \$35,880 George E. Templeton; 3 months; \$1,505 UNIVERSITY OF BUFFALO, Buffalo, N.Y.; Frank R. Olson; 9 months; \$7,600 UNIVERSITY OF CALIFORNIA, Berkeley; Howell V. Daly; 11 months; \$13,760

Donald M. Reynolds, Davis; 1 year; \$9,315 Edward C. Carterette, Los Angeles; 11 months; \$17,525 Daniel Kivelson, Los Angeles; 35 months; \$57,385 Malcolm F. Smiley, Riverside; 1 year; \$8,365 UNIVERSITY OF CHICAGO, Chicago, Ill.; Dorothea Starbuck Miller; 1 year; \$17,220 Theodore Schaefer, Jr.; 11 months; \$12,050 UNIVERSITY OF COLORADO, Boulder; Donald G. Burkhard; 1 year; \$18,460 Frank Kreith; 3 months; \$20,470 John W. Marr; 35 months; \$30,965 Burnett Meyer; 9 months; \$2,945 UNIVERSITY OF DELAWARE, Newark; Charles B. Cooper; 2 months; \$780 Charles B. Cooper; 11 months; \$2,770 UNIVERSITY OF GEORGIA, Athens; J. Clyde Driggers; 1 year; \$10,090 John H. Henkel; 5 months; \$31,325 Robert A. McRorie; 1 year; \$15,420 R. Barclay McGhee; 3 months; \$6,910 UNIVERSITY OF IDAHO, Moscow; Malcolm M. Renfrew; 11 months; \$6,195 Malcolm M. Renfrew; 23 months; \$9,415 University of Illinois, Urbana; D. E. Alexander; 3 months; \$695 Morton W. Weir; 11 months; \$23,205 UNIVERSITY OF KANSAS, Lawrence; Ray P. Cuzzort; 1 year; \$7,020 Harold F. Rosson; 3 months; \$5,520 Frederick E. Samson, Jr.; 1 year; \$30,090 Edward E. Smissman; 1 year; \$15,640 Arnold A. Strassenburg; 1 year; \$5,425 UNIVERSITY OF KANSAS CITY, Kansas City, Mo.; Frank Millich; 3 months; \$11,985 UNIVERSITY OF LOUISVILLE, Louisville, Ky.; Calvin A. Lang; 3 months; \$8,590 Kevin T. Potts; 1 year; \$6,035 UNIVERSITY OF MARYLAND, College Park; John W. Brace; 11 months; \$5,095 Joshua R. C. Brown; 1 year; \$5,860 Gilbert Gordon; 1 year; \$11,270 UNIVERSITY OF MASSACHUSETTS. Amherst; John A. Chandler; 3 months; \$7,935 Phillips R. Jones; 23 months; \$6,670 D. S. Van Fleet; 1 year; \$10,235 UNIVERSITY OF MIAMI, Coral Gables, Fla.; Samuel P. Myers, Miami; 6 months; \$9,975 University of Michigan, Ann Arbor; Kenneth L. Jones; 2 months; \$5,050 Jack E. McLaughlin; 2 months; \$17,045 Orren C. Mohler, 3 months; \$3,220 Robert C. Taylor; 1 year; \$10,925 Russell T. Woodburne; 11 months; \$6,210 Minneapolis; OF MINNESOTA UNIVERSITY James C. Nichol; 1 year; \$7,360 George W. Preckshot; 26 months; \$31,445 University of Mississippi, University; Virgil M. Benson: 23 months: \$29,495

Q. Fuller, Rolla; 1 year; \$6,545 Mack M. Jones; 1 year; \$6,435 UNIVERSITY OF NEBRASKA, Lincoln; G. A. Gallup; 11 months; \$11,590 J. A. Fagerstrom; 3 months; \$2,290 UNIVERSITY OF NEVADA, Reno; Kenneth C. Kemp; 1 year; \$4,570 Paul F. Secord; 1 year; \$8,065 UNIVERSITY OF NEW HAMPSHIRE, Durham; M. Evans Munroe; 1 year; \$14,560 Robert Lyle; 3 months; \$4,025 University of New Mexico, Albuquerque; James R. Barton; 1 year; \$8,370 University of North Carolina, Chapel Hill; James C. Kellett, Jr.; 1 year; \$3,675 E. O. Beal, Raleigh; 9 months; \$1,840 Paul H. Harvey, Raleigh; 5 months; \$21,045 T. E. Maki, Raleigh; 1 year; \$6,040 Richard L. Simpson, Raleigh; 3 months; \$12,125 Richard L. Simpson; 1 year; \$4,000 Alfred J. Stamm, Raleigh; 1 year; \$4,140 Ralph C. Swann, Raleigh; 3 months; \$8,425 UNIVERSITY OF NORTH DAKOTA, Grand Forks; Benjamin De Boer; 1 year; \$4,000 Robert Rosenthal; 3 months; \$2,070 UNIVERSITY OF NOTES DAME, Notre Dame, Ind.; Kenneth R. Lauer; 1 year; \$5,830 E. A. Peretti; 1 year; \$3,470 UNIVERSITY OF OKLAHOMA, Norman; Robert D. Burns; 35 months; \$60,200
Alfred J. Weinheimer; 1 year; \$10,550 UNIVERSITY OF OREGON, Eugene; A. F. Moursund; 35 months; \$26,560 Kenneth Polk; 35 months; \$34,640 Harry A. Shoemaker; 23 months; \$36,040 University of Pennsylvania, Philadelphia; George E. Schweigert; 11 months; \$6,800 UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; A. F. Frederickson; 1 year; \$6,955 University of Portland, Portland, Oreg.; Ambrose J. Wheeler; 9 months; \$9,290 University of Puerto Rico, Mayaguez; Justo Hernandez Mora; 1 year; \$2,990 Noemi G. Martinez Nadal; 9 months; UNIVERSITY OF REDLANDS, Redlands, Calif.; Reinhold J. Krantz; 1 year; \$8,950 UNIVERSITY OF RHODE ISLAND, Kingston; Charles Polk; 1 year; \$8,390 UNIVERSITY OF ROCHESTER, Rochester, N.Y.; S. D. S. Spragg; 23 months; \$13,050 cisco, Calif; William Maroney; 1 year; \$4,780 UNIVERSITY OF SAN FRANCISCO, San Fran-UNIVERSITY OF SANTA CLARA, Santa Clara, Calif.; Abraham P. Hillman; 34 months; \$26,700 University of Scranton, Scranton, Martin D. Appleton; 3 months; \$6,500 University of the South, Sewance, Tenn.; William T. Allen; 3 months; \$1,980 David B. Camp; 3 months; \$3,350 Stephen Puckette; 3 months; \$5,775 UNIVERSITY OF SOUTH CAROLINA, Columbia; O. D. Bonner; 35 months; \$14,490 E. Fontelle Thompson, Jr.; 3 months; \$7,045 5 0 263

\$7,475 UNIVERSITY OF SOUTH FLORIDA. Tampa; Jack E. Fernandez; 1 year; \$16,295 University of Southwestern Louisiana. Lafayette; James R. Oliver; 1 year; \$4,410 Tennessee, UNIVERSITY OF Knoxville: Newell S. Bowman; 3 months; \$11,670 B. J. Demott; 1 year; \$4,140 Arthur W. Jones; 11 months; \$4,715 Alvin H. Nielsen ; 1 year ; \$5,865 Fred H. Norris; 1 year; \$6,385 Seldon D. Feurt, Memphis; 1 year; \$5,895 William E. Jefferson, Jr., Memphis; 3 months; \$6,555 University of Texas, Austin; Arwin A. Dougal; 1 year; \$5,405 Frank N. Edmonds, Jr.; 2 months; \$1,555 M. C. Huffstutler, Jr.; 1 year; \$5,455 University of Utah, Salt Lake City; M. Duane Brown : 35 months : \$20,290 Don M. Rees; 1 year; \$4,180 University of Vermont, Burlington; Clinton D. Cook; 3 months; \$7,015
Albert D. Crowell; 1 year; \$3,450 Bennett B. Murdock, Jr.; 23 months; \$14,830 UNIVERSITY WASHINGTON. OF Seattle: Nathan A. Hall; 1 year; \$5,740 William B. Woolf; 11 months; \$21,125 University of Wisconsin, Madison; Robert H. Dott, Jr.; 1 year; \$3,825 Harry L. Madison; 11 months; \$11,355 Harry P. Sharp ; 1 year ; \$15,035 University of Wyoming, Laramie; Brainerd Mears, Jr.; 3 months; \$2,600 URSULINE COLLEGE, Louisville, E Angelica Seibert; 22 months; \$5,890 Ky.; M. UTAH STATE UNIVERSITY, Logan; DuWayne L. Goodwin; 1 year; \$6,095 Allen W. Stokes; 3 months; \$3.910 VANDERBILT UNIVERSITY, Nashville, Tenn.; James J. Friauf; 2 months; \$9,320 William H. Rowan ; 1 year ; \$5,175 W. Dennis Threadgill; 1 year; \$4,600 VILLA MADONNA COLLEGE, Covington, Ky.; James E. Cantrill; 1 year; \$4,335 John F. Schuler; 1 year; \$4,945 VILLANOVA UNIVERSITY, Villanova, Pa.; R. E. White; 1 year; \$4,570 VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg ; C. E. Howes ; 1 year ; \$2,700 Robert C. Krug; 5 months; \$6,440 George W. Litton; 23 months; \$1,725 VIRGINIA STATE COLLEGE, Petersburg: Bernard R. Woodson, Jr.; 1 year; \$5,100 WABASH COLLEGE, Crawfordsville, Ind.; Robert L. Henry; 3 months; \$1,400 WASHINGTON AND LEE UNIVERSITY, Lexington, Va.; J. Thomas Ratchford; 9 months; \$2,260 WASHINGTON STATE UNIVERSITY, Pullman; Richard A. Parker; 23 months; \$12,190 WASHINGTON UNIVERSITY, St. Louis, Mo.; Norton H. Nickerson; 1 year; \$3,820 WAYNE STATE UNIVERSITY, Detroit, Mich.; Harold E. Bailey; 1 year; \$2,445 Henry V. Bohm; 1 year; \$11,900 WELLESLEY COLLEGE, Wellesley, Mass.; Jean V. Crawford : 2 months : \$7.115

Eugene C. Woodward, Jr.; 23 months; WESLEYAN UNIVERSITY, Middletown, Conn.; G. Philip Johnson; 34 months; \$49,785 Joe Webb Peoples; 1 year; \$4,610 WEST VIRGINIA UNIVERSITY, Morgantown; Horace L. Barnett; 1 year; \$7,130

Jack D. Graybeal; 3 months; \$9,715 Jerome F. Parmer; 1 year; \$8,190 WESTERN MICHIGAN UNIVERSITY, Kalamazoo; Lillian H. Meyer; 11 months; \$8,300 Paul Rood; 11 months; \$3,670 WESTERN RESERVE UNIVERSITY, Cleveland. Ohio; Howard A. Schneiderman; 1 year; \$10,750 WILKES COLLEGE, Wilkes-Barre, Pa.; Francis J. Michelini; 13 months: \$12.335 WILLAMETTE UNIVERSITY, Salem, Robert L. Purbrick; 1 year; \$4,945 WILLIAM JEWELL COLLEGE, Liberty, Mo.; Wallace A. Hilton; 9 months; \$1,440 WILLIAMS COLLEGE, Williamstown. Thomas C. McGill; 3 months; \$2,300 WILMINGTON COLLEGE, Wilmington, O Harry H. Johnston; 3 months; \$1,890 WORCESTER POLYTECHNIC INSTITUTE Worcester, Mass.; Wilmer L. Kranich; 1 year; \$12,280 Allan E. Parker; 8 months; \$32,775 Donald W. Zwiep; 3 months; \$4,310 XAVIER UNIVERSITY, Cincinnati, Ohio; Harvey A. Dube; 1 year; \$8,690 John B. Hart; 3 months; \$2,430 YALE UNIVERSITY, New Haven, Conn.; Nuel D. Belnap, Jr.; 5 months; \$7,935 E. J. Boell; 23 months; \$23,575 John P. Chesick; 35 months; \$77,400 John E. Sanders; 23 months; \$31,500 John G. Skalnik; 1 year; \$6,440 YESHIVA UNIVERSITY, New York, N.Y.; Phyllis H. Cahn; 23 months; \$3,110 Harry E. Rauch; 1 year; \$5,460 VISITING SCIENTISTS TO SECONDARY SCHOOLS PROGRAM American Chemical Society, Washington, D.C.; Donald J. Cook, De Pauw University; 32 months; \$24,300 AMERICAN INSTITUTE OF BIOLOGICAL SCI-ENCES, Washington, D.C.; Hiden T. Cox: 30 month: \$63,540 MATHEMATICAL ASSOCIATION OF AMERICA, Buffalo, N.Y.; Cletus O. Oakley, Haverford College; 1 year; \$12,000 VISITING SCIENTISTS TO COLLEGES PRO-GRAM AMBRICAN ANTHROPOLOGICAL ASSOCIATION, Washington, D.C.; Leslie A. White; 30 months; \$20,855 AMERICAN ASTRONOMICAL SOCIETY, Princeton, N.J.; Franklyn M. Branley; 32 months; \$23.675 AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Hiden T. Cox; 30 months; \$97,500

AMERICAN INSTITUTE OF PHYSICS, New York,

AMERICAN METEOROLOGICAL SOCIETY, Boston,

Mass.; Kenneth C. Spengler; 32 months; \$33.350

Elmer Hutchisson; 31 months;

N.Y.;

\$25,715

TION, Urbana, Illinois; W. Leighton Collins; 31 months: \$24,700

MATHEMATICAL ASSOCIATION OF AMERICA, Inc., Buffalo, N.Y.; Robert A. Rosenbaum; 33 months; \$50,000

# ECONOMIC AND STATISTICAL **STUDIES**

U.S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS, Washington, D.C.; Maxwell R. Conklin; Survey of Funds for Performance and Financing of Research and Development in Industrial Firms During 1961; \$95,000

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, OFFICE OF EDUCATION, Washington, D.C.; Virgil R. Walker; National Science Foundation Survey of Manpower in Colleges and Universities, Academic Year 1961; 1 year; \$18,000

U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, Washington, D.C.; Ewan Clague; Cost Index Applicable to Research and Development Budgets; \$17,000

# INSTITUTIONAL PROGRAMS

### **GRADUATE-LEVEL RESEARCH FACILITIES**

ADELPHI COLLEGE, Garden City, N.Y.; A. M. Vogel; Construction of a Laboratory for Research in Chemistry; 1 year; \$5,900

AGRICULTURAL & MECHANICAL COLLEGE OF TEXAS, College Station; Dale F. Leipper; Expansion and Renovation of Research Facilities in the Department of Oceanography and Meteorology; 1 year; \$25,000

A. M. Sorensen, Jr.; Laboratory Facilities for Research in the Physiology of Reproduction Section; 1 year; \$30,000

BRANDEIS UNIVERSITY, Waltham, Mass.; Edgar H. Brown, Jr.; Construction of Research Facilities in a Mathematics Building;

2 years; \$166,000 Harold P. Klein; Construction of New Research Facilities in Department of Biology; 3 years; \$771,900

S. S. Schweber; Construction of Physics Research Facilities in New Physics Building; 2 years; \$500,000

BROWN UNIVERSITY, Providence, R.I.; Joseph F. Bunnett: Construction of an Addition to and Alterations in an Existing Building to Provide Research Facilities in Department

of Chemistry; 1 year; \$70,000 Paul F. Maeder; Completion of Research Space in the New Engineering Laboratory;

1 year; \$67,100

Maimon Nasatir; Renovation of the Plant Physiology Laboratory; 1 year; \$10,100

R. A. Yund; Remodeling Space for a Mineralogical Research Laboratory; 1 year;

BRYN MAWR COLLEGE, Bryn Mawr, Pa.; Walter C. Michels; Expansion of Research Facilities for the Departments of Physics, Mathematics, Geology, and Chemistry; 1 year; \$150,000

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena; F. C. Lindvall; Graduate Research Portion of a New Computing and Electrical Sciences Laboratories Building; 21/2 years; \$842,000

Robert P. Sharp; Laboratory Research

AMERICAN SOCIETY FOR ENGINEERING EDUCA- | Related Aspects of Isotope Geochemistry; 1 year; \$15,550

> CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; L. A. Finzi and A. G. Milnes; Renovation of Research Facilities in the Field of Cryogenic Electronics; 1 year; \$5,800

> CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; S. W. McCuskey; Expansion of Astronomy Research Facilities at the Warner and Swasey Observatory; 1 year; \$67,200 CLARK UNIVERSITY, Worcester, Mass.; R. S. Anderson; Renovation of Space for Physics Research Laboratories; 1 year; \$21,400

> COLUMBIA UNIVERSITY, New York, N.Y.; C. O. Beckman; Renovation of Chemical Research Laboratories; 1 year; \$133,000

> Richard Christie; Remodeling Space for Research Facilities in Social Psychology;

1 year; \$19,200 S. Eilenberg; Remodeling of Research Facilities for the Department of Mathematics;

1 year; \$60,000

Maurice Ewing, Palisades; Construction of a Research Laboratory Building at the Lamont Geological Observatory; 2 years; \$250,000

Harry Grundfest; Remodeling Space for Electrophysiology Laboratory; 1 year;

CORNELL UNIVERSITY, Ithaca, N.Y.; William Lambert and Leo Meltzer; Remodeling Laboratory Facilities for Research in Experimental Social Psychology; 1 year; \$9,300

F. A. Long; Conversion of Two Rooms into Modern Chemistry Research Laboratories; 1 year; \$18,000

M. L. Nichols; Renovation of the Ventilating System in Chemistry Department; 1 year; \$12,000

L. G. Parratt; Construction of Research Facilities in a New Physical Sciences Building; 2 years; \$270,000

A. F. Ross; Completion and Furnishing of Virology-Nematology Research Laboratory, 1 year; \$64,500

DUKE UNIVERSITY, Durham, N.C.; Karl E. Zener and John C. McKinney; Expansion and Renovation of Research Facilities in Department of Psychology and Department of Sociology and Anthropology; 3 years; \$462,700

EMORY UNIVERSITY, Atlanta, Ga.; Goodchild; Renovation of Research Laboratories in the Department of Biology; 1 year; \$5,300

FORDHAM UNIVERSITY, New York, N.Y.; E. J. Moriconi; Refurbishment and Renovation of Space into a Physical Chemistry Research Laboratory; 1 year; \$7,800

GEORGETOWN UNIVERSITY, Washington, D.C.; John C. Rose; Construction of New and Renovation of Existing Laboratory Facilities in Department of Physiology and Biophysics; 1 year; \$31,200

Matthew P. Thekaekara; Fixed Equipment for Research Facility in Physics; 1 year; \$24,700

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta; H. V. Grubb; Construction of Laboratory Facilities in a New Chemical Engineering-Ceramic Engineering Building; 2 years; \$150,000

HARVARD UNIVERSITY, Cambridge, Mass.; Facilities for Paleoecology, Paleontology, and | Francis Birch; Construction of a New Laboratory for Research in Experimental Geology; 2 years; \$200,000

F. Karl Willenbrock; Construction of New Engineering Laboratory; 2 years; \$225,000 Robert W. White and Edwin B. Newman;

Robert W. White and Edwin B. Newman; Construction of Research Facilities for Departments of Psychology and Social Relations in New Behavioral Sciences Building; 3 years; \$1,400,000

ILLINOIS STATE NORMAL UNIVERSITY, Normal; R. O. Rilett; Construction of Research Facilities for the Department of Biological Sciences; 2 years; \$180,000

INDIANA UNIVERSITY, Bloomington; Lyle V. Beck; Remodeling of a Room for a Research Laboratory for Pharmacology; 1 year; \$4,000

J. A. Franklin; Construction of a Research Wing for the Chemistry Building; 2 years; \$150,000

M. M. Rhoades; Laboratory Facilities for Research in the Department of Botany; 1

year; \$1,100 T. M. Sonneborn; Remodeling Facilities for Research in Zoology; 1 year; \$2,300

IOWA STATE UNIVERSITY, Ames; R. S. Allen; Research Facilities for Department of Biochemistry-Biophysics in New Chemistry Building Addition; 3 years; \$217,500

Floyd Andre; Construction of Research Facilities in a New Animal Industries Building; 3 years; \$50,000

T. A. Bancroft; Expansion, Modernization, and Renovation of Mathematical Statistics Research Facilities; 1 year; \$4,300

G. A. Russell; Research Facilities for Department of Chemistry in New Chemistry Building Addition; 3 years; \$400,000

KANSAS STATE UNIVERSITY, Manhattan, A. B. Cardwell; Construction of Laboratories for Research in Physics; 2 years; \$200,000

Milton E. Raville; Construction of a Research Laboratory in the Department of Applied Mechanics; 1 year; \$4,000

KENT STATE UNIVERSITY, Kent, Ohio; Vincent Gallicchio; Renovation of Laboratory Facilities in the Life Sciences Research Center; 1 year; \$15,600

LOUISIANA STATE UNIVERSITY, Baton Rouge; C. S. McCleskey; Expansion of Research Laboratories for Bacteriology; 1 year; \$8,000 Hulen B. Williams; Completion of Facili-

Hulen B. Williams; Completion of Facilities for Research in the Department of Chemistry; 1 year; \$4,900

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; Arthur C. Cope; Remodeling Facilities for Analytical and Physical Chemistry Research; 18 months; \$60,000

John W. Irvine, Jr.; Remodeling and Refurnishing Research Facilities in Nuclear and Inorganic Chemistry Laboratories; 1

year; \$228,500 T. J. Thompson and N. C. Rasmussen; Renovation and Expansion of Laboratory Facilities for Nuclear Energy Research; 1 year; \$139,700

Kenneth R. Wadleigh; Development of a New Interdisciplinary Engineering Laboratory; 1 year; \$80,000

MICHIGAN STATE UNIVERSITY, East Lansing; Donald M. Johnson; Renovation of a Building into a Research Laboratory in Psychology; 2 years; \$300,000 J. D. Ryder; Construction of Research Fa-

J. D. Ryder; Construction of Research Facilities in Engineering Science; 1 year; \$250,000

MONTANA STATE COLLEGE, Bozeman; D. J. Reed; Construction of Facilities for Research in New Chemistry Building; 1 year; \$25,000

NEW YORK UNIVERSITY, New York; Stuart W. Cook; Alteration of Space for Research Facilities in Physiological Psychology and Animal Behavior; 1 year; \$41,000

James J. Stoker; Relocation and Expansion of the Research Facilities of the Institute of Mathematical Sciences—Phase I; 1 year; \$192,400

NORTH DAKOTA STATE UNIVERSITY, Fargo; J. A. Callenbach; Construction of Controlled Environment Facilities for Research in the Natural Sciences; 1 year; \$15,000

A. B. Schooler; New Laboratory Facilities for Cytogentic Research; 1 year; \$1,600

NORTHWESTERN UNIVERSITY, Evanston, Ill.; Robert W. Hull and William T. Doyle; Renovation of Laboratory Facilities in the Department of Biological Science; 1 year; \$14.600

Allen S. Hussey; New Laboratory Faciliities for Research in Chemistry (Biochemistry); 2 years; \$88,800

OHIO STATE UNIVERSITY, Columbus; Mars G. Fontana; New Facilities for Research in Metal Physics and Physical Chemistry of Metals; 2 years; \$194,375

Wilfrid R. Foster; Construction of Facilities for Research in Mineralogy, Crystallography, and Geochemistry; 1½ years; \$55,000

Q. Van Winkle; Conversion of Space into a Laboratory for Surface Chemistry Research; 1 year; \$6,700

OHIO UNIVERSITY, Athens; D. R. Clippinger; Conversion of Space to Research Facilities for Physics and Chemistry; 1 year; \$10,000 OKLAHOMA STATE UNIVERSITY, Stillwater; J. H. Boggs; Renovation of Mechanical Engineering Research Laboratories; 1 year; \$12,000

Louis E. Hawkins; Controlled Environment Facility for Plant Science Research; 1 year: \$95,000

1 year; \$95,000 L. M. Henderson; Construction of Research Laboratories in Biochemistry Portion of Chemistry-Physics Building; 3 years; \$150,000

OREGON STATE UNIVERSITY, Corvallis; Vernon H. Cheldelin; Fixed Equipment for the New Science Research Institute Building; 2 years; \$37,000

Milo Popovich; Construction of Research Laboratories in Fields Related to Radiation Science; 2 years; \$200,000

PENNSYLVANIA STATE UNIVERSITY, University Park; J. G. Aston and J. J. Fritz; Construction of Laboratory Facilities for Low Temperature High Magnetic Field Research; 1 year; \$31,000

Arthur H. Brayfield; Renovation of a Facility for Research in Physiological and Comparative Psychology: 1 year: \$8,900

Comparative Psychology; 1 year; \$8,900 R. H. Jahns; Construction of an Earth Sciences Addition to the Mineral Sciences Building; 2½ years; \$600,000

F. W. Lampe; Conversion of Basement Area into Facilities for Research in Chemistry; 1 year; \$50,000 H. B. Sprague, J. E. Livingston, and R. E.

H. B. Sprague, J. E. Livingston, and R. E. Larson; Research Facilities at the Plant Science Research Center; 1 year; \$50,000

J. M. Warren; Construction of a Laboratory for Psychobiological Research; 2 years: \$154,100

A. H. Waynick; Construction of a New Wing and Radio Astronomy Laboratory for the Electrical Engineering Department; 2 years; \$227,800

POLYTECHNIC INSTITUTE OF BROOKLYN, Brooklyn, N.Y.; C. G. Overberger; Renova-tion and Expansion of Research Facilities in Chemistry Department: 11/2 years: \$53,700

PRINCETON UNIVERSITY, Princeton, N.J.; D. F. Hornig; Construction of a New Chemistry Research Laboratory; 2 years; \$500,000 William P. Jacobs; Controlled Environ-

ment Rooms and Chambers for Biological Research; 1 year; \$3,300

Ernest Glen Wever; Construction of Auditory Research Laboratories: 2 years: \$96.700

PROVIDENCE COLLEGE, Providence, R.I.; Frederick C. Hickey; Construction of Facilities in Medical Research Laboratory; 1 year; \$32,400

PURDUE UNIVERSITY, Lafayette, Ind.; H. Y. Fan; Remodeling of Laboratory Facilities for Research in Solid State Physics; 1 year; \$15,000

J. V. Osmun: Controlled Environment Fa-cility for Research in Entomology: 1 year: \$3,600

J. R. Shay; Renovation and Partial Furnishing of Botanical Sciences Laboratories; 1 year; \$46,100

RENSSELAER POLYTECHNIC INSTITUTE, Troy, N.Y.; Ronald J. Baskin; Construction of Facilities for Research in Nerve and Muscle Physiology; 1 year; \$5,000

William R. Clough; Renovation of Laboratory Facilities for Research on High Temperature and Refractory Metals; 1 year; \$1,500

Donald S. Miller: Remodeling of Facilities for Geochemistry Research Laboratory; 1 year; \$2,600

Robert L. Schiffman and Emmericus C. W. A. Geuze; Modernization of the Winslow Laboratories for Soil Mechanics Research; 1 year; \$13,200

RUTGERS, THE STATE UNIVERSITY, Brunswick, N.J.; F. Kenneth Berrien; Renovation of Facilities for Research in the Department of Psychology; 1 year; \$13,700

John H. Koenig; Construction of Ceramic Research Facilities in the New College of Engineering Building; 1 year; \$50,000 Morgan Upton and Kenneth Haun; Con-

struction of a Psychopharmacology Laboratory; 1 year; \$22,000

Peter A. Van der Meulen; Construction of Additional Research Facilities in Laboratory of School of Chemistry; 2 years; \$200,000

ST. JOHN'S UNIVERSITY, Jamaica, N.Y.; F. C. Chang; Renovation of Space for Nuclear Research Laboratory; 1 year; \$5,500

ST. LOUIS UNIVERSITY, St. Louis, Mo.; Kenneth H. Adams; Construction of Research Laboratories in the Department of Chemis-try; 2 years; \$300,000

Alfred H. Weber; Construction of Research Laboratories in the Department of Physics; 2 years: \$223,000

STANFORD UNIVERSITY, Stanford, Calif.; search Facilities for the Depart Gilbarg; Renovation of Space to Dairy Science; 2 years; \$7,100

House Mathematics Department and Mathematics Laboratory; 2 years; \$250,000

A. Kent Christensen; Remodeling Laboratory Facilities for Research Utilizing Electron Miscroscopy; 1 year; \$50,000

Joseph M. Pettit; Remodeling and Renovation of Laboratory Buildings for Research in Engineering Mechanics; 1 year; \$100,000

J. M. Pettit: Remodeling of Research Laboratories in Materials Science and Chemical Engineering; 2 years; \$125,000

Patrick C. Suppes: Renovation of Laboratory Facilities in the Institute for Mathematical Studies in the Social Sciences; 1 year; \$12,500

STATE UNIVERSITY OF IOWA, IOWA City; Jerry J. Koliros; Construction of Zoology Building Research Addition; 3 years; \$352,100

STATE UNIVERSITY OF NEW YORK COLLEGE OF CERAMICS AT ALFRED UNIVERSITY, Alfred, N.Y.: W. G. Lawrence: Construction of Research Facilities for College of Ceramics; 1 year; \$11,000

STATE UNIVERSITY OF NEW YORK COLLEGE OF FORESTRY AT SYRACUSE UNIVERSITY, Syracuse, N.Y.; Ralph T. King; Rehabilitation of the Soil Invertebrate Fauna Laboratory in the Department of Forest Zoology; 1 year; \$5,700

SYRACUSE UNIVERSITY, Syracuse, N.Y.; William M. Merrill; Renovation and Modernization of Research Laboratories in the Department of Geology; 1 year; \$25,000

Frederick G. Sherman; Renovation and Expansion of Natural Sciences Research Library; 1 year; \$38,100

G. A. Wiley; Renovation and Expansion of Organic Chemistry Research Laboratory Space; 1 year; \$20,500

Henry E. Wirth; Renovation of Research Facilities in the Department of Chemistry; 1 year: \$11.900

TEMPLE UNIVERSITY, Philadelphia, Mann-Chiang Niu; Renovation of Research Facilities in Embryology Laboratories; 1 year; \$23,100

Earl H. Spaulding: Conversion of Unfinished Space to a Laboratory for Graduate Research and Training in Microbiology; 2 years; \$63,700

TUFTS UNIVERSITY, Medford, Mass.; B. F. Stearns and Kathryn A. McCarthy; Expansion of Laboratory Facilities for Research in Physics; 1 year; \$9,000

TULANE UNIVERSITY, New Orleans, La.; Ralph M. Rotty; Construction of Research Facilities for Mechanical Engineering Department; 1 year; \$29,500

UNIVERSITY OF ALASKA, College; K. M. Rae; Construction of Research Facilities for the of Marine Science; 2 years; Institute \$100.000

Wallace H. Fuller: Graduate Research Facilities in Agricultural Chemistry and Soils; 1 year; \$48,000

George A. Gries; Renovation and Furnishing of Research Facilities in the Department of Plant Pathology; 2 years; \$30,000

UNIVERSITY OF ARIZONA, Tucson; William H. Brown; Renovation and Furnishing of Research Facilities for the Department of Laurence A. Carruth; Renovation and Furnishing of Research Facilities for De-

partment of Entomology; 2 years; \$33,000
Archie J. Deutscham, Jr.; Construction
of Laboratory Facilities in New Plant; Science Building for Research in Agricul-

tural Biochemistry; 1 year; \$10,000 Henry Freiser; Remodeling of Facilities for Research in the Department of Chem-

istry; 1½ years; \$100,000 D. F. McAlister; Renovation and Furnishing of Research Facilities for Department of

Agronomy; 2 years; \$20,000
Terah L. Smiley; Completion of Laboratory Facilities for Paleontological Research;

1 year; \$15,500

University of Arkansas, Fayetteville; Robert C. Holland, Little Rock; Remodeling of Space for Laboratory Facilities in the De-partment of Anatomy; 1 year; \$6,600

University of California, Berkeley; Ralph Emerson; Remodeling Rooms for Research in Life Sciences Building; 1 year; \$16,000 A. C. Helmholz; Remodeling of Space to Provide Research Facilities in the Depart-

ment of Physics; 1 year; \$144,500

Leonard Machlis; Renovation of Life Sci-

ences Building; 2 years; \$225,600
Joseph A. Pask; Alteration and Rehabilitation of Facilities for Research in the
Department of Mineral Technology; 1 year; \$127,500

Milton A. Miller, Davis; Renovation of Laboratory Facilities in the Department of Zoology; 1 year; \$41,500

Leonard L. Morris and J. E. Knott. Davis : Controlled Temperature Facilities for Research in Plant Physiology; 3 years; \$200,000

Walter Kohn, San Diego; Construction of Facilities for Research in Physics-Proposed Building 0; 2 years; \$300,000

Walter Munk, San Diego; Construction of an Atmospheric Research Laboratory at La Jolla; 2 years; \$276,000

University of Chicago, Chicago, Ill.; Herbert L. Anderson; Laboratory Extensions for Physics Research in Enrico Fermi Institute for Nuclear Studies; 1 year; \$79,400

University of Cincinnati, Cincinnati, Ohio; William F. Jenks; Renovation of Laboratory Facilities for Research in Geology; 1 year;

D. A. Wells; Renovation of Facilities for Research in Physics; 1 year; \$4,800

University of Connecticut. Storrs: Hugh Clark; Remodeling of Research Facilities for the Department of Genetics : 1 year : \$35,900 University of Delaware, Newark; John T. Lanzetta and G. Fred Somers; Construction of an Extension to and Renovation of Existing Laboratory Facilities in Departments of Biological Sciences and Psychology; 8 years;

University of Denver, Denver, Colo.; W. M. Mueller; Construction of an Annex for Metallurgical Research; 1 year; \$51,500

UNIVERSITY OF FLORIDA, Gainesville; A. D. Conger; Construction of Facilities for Radiation Biology Research; 1 year; \$6,000

George K. Davis; Construction of a Nu-

clear Science Building; 2 years; \$350,000 Frederick N. Rhines; Renovation of Laboratory Facilities for Research in Metallurgical Engineering; 1 year; \$15,000

University of Georgia, Athens; C. W. Kuhn, Griffin; Construction of Laboratory Facilities for Virus Research and a Greenhouse; 1 year; \$21,700

Robert A. McRorie; Expansion of Facilities for Research in Biochemistry; 1 year; \$27,100

John H. Owen; Construction of Facilities for Research in Plant Pathology and Plant Breeding; 1 year; \$12,500
A. W. Scott; Laboratory Facilities for

Research in Chemistry; 1 year; \$20,000

UNIVERSITY OF IDAHO, MOSCOW; E. W. Tisdale; Renovation of Laboratory Facilities in College of Forestry; 1 year; \$6,700

University of Illinois, Urbana; George A. Deschamps; Construction of a Laboratory for Research in Antennas and Electromag-

netic Theory; 1 year; \$110,000 L. Goldstein; Construction of Additional Laboratory Facilities for Research in Gas-

eous Electronics; 1 year; \$60,000 David Gottlieb; Renovation and Equipping Laboratory Facilities for Research in Physiology and Biochemistry; 1 year; \$10,600

H. O. Halvorson; Research Facility for the School of Life Sciences; 1 year;

H. O. Halvorson; Construction of a Life Sciences Research Laboratory; 4 years; \$1,600,000

J. B. Kitzmiller and H. O. Halvorson; Remodeling a Laboratory for Research in Zoology; 1 year; \$9,300 J. B. Kitzmiller and Wilson N. Stewart;

Extension of Natural History Building to Provide Research Facilities for Zoology and Botany; 1 year; \$15,600
A. V. Nalbandov; Remodeling of Research

Space in Animal Genetics Laboratory; 1 year; \$14.800

A. H. Taub; The Extension of the Digital

Computer Laboratory Building; 1 year; \$188,900

UNIVERSITY OF KANSAS, Lawrence; L. B. Srinath and K. H. Lenzen; Construction of New Research Laboratories for the Department of Engineering Mechanics; 1 year; \$70,000

University of Maine, Orono; Bruce R. Poulton; Construction of Graduate Nutrition Laboratory Facilities; 1 year; \$7,000

UNIVERSITY OF MARYLAND, College Park; Raymond N. Doetsch and Michael J. Pelczar; Renovation and Expansion of Research Laboratories in Microbiology; 2 years; \$81,600

John S. Toll; Expansion of Physics Re-Laboratory Facilities; 2 years; search \$850,000

Charles E. White; Renovation and Modification of Research Facilities in the Department of Chemistry; 1 year; \$18,300 UNIVERSITY OF MICHIGAN, Ann Arbor; Leigh C. Anderson; Renovation and Construction of Research Laboratories in the Department of Chemistry; 1 year; \$22,900

Kenneth L. Jones; Renovation and Construction of Research Laboratories in the Department of Botany; 1 year; \$77,400

Kenneth L. Jones; Renovation and Construction of Faculty and Graduate Research Laboratories in the Department of Botany; 1 year; \$99,100

\$300,000

E. Lowell Kelly; Remodeling and Extension of Research Laboratories in the Department of Psychology; 1 year; \$60,000 Rensis Likert; Construction of a Research Facility for the Institute for Social Research; 3 years; \$200,000

UNIVERSITY OF MINNESOTA, Minneapolis; Perry L. Blackshear, Jr.; Renovation of and Additions to Research Facilities in the Combustion Laboratory; 1 year; \$13,200

Preston E. Cloud, Jr., Renovation and Extension of Geological Research Laboratories; 1 year; \$87,000

Nelson T. Spratt; Remodeling of Space for Research in the Department of Zoology; 1 year; \$7,100

Frederick M. Swain; Remodeling Research Facilities in the Micropaleontology Laboratory; 1 year; \$4,100

H. E. Wright, Jr., Robert E. Sloan and William C. Phinney; Remodeling Laboratories for Research in Earth Sciences; 1 year; \$12,000

UNIVERSITY OF MISSOURI, Columbia; Wayne H. Decker; Remodeling Laboratory Facilities for Research in Atmospheric Sciences; 1 year; \$2,000

UNIVERSITY OF NEBRASKA, Lincoln; F. G. Teubner; Renovation of Space for Research Facilities in Plant Physiology and Biochemistry: 1 year: \$7.150

istry; 1 year; \$7,150 Edward J. Zimmerman; Construction of a Physics Research Building; 2 years; \$600,000

UNIVERSITY OF NEW HAMPSHIRE, Durham; Robert E. Lyle; Renovation of Research Laboratories in the Department of Chemistry; 1 year; \$25,450

UNIVERSITY OF NEW MEXICO, Albuquerque; James S. Findley; Renovation and Research Facilities for a Laboratory in the Department of Biology; 1 year; \$8,500 Marvin L. Riedesel; Facilities for Physi-

Marvin L. Riedesel; Facilities for Physiology Research Laboratories; 1 year; \$3,000 UNIVERSITY OF NORTH CAROLINA, Chapel Hill; H. F. Robinson, Raleigh; Construction of New Biological Sciences Research Facilities; 3 years; \$216,700

UNIVERSITY OF NORTH DAKOTA, Grand Forks; G. C. Wheeler; Expansion of Research Facilities in the Biology Laboratories; 1 year; \$25,000

UNIVERSITY OF OKLAHOMA, Norman; G. W. Murphy; Renovation of Facilities for Chemistry Research; 1 year; \$14,500

UNIVERSITY OF PENNSYLVANIA, Philadelphia; Frank Bradshaw Wood; Extension of Research Facilities of the Astronomy Department in Physical Sciences Building; 2½ years; \$160,000

Robert R. Bush; Construction of a Psychological Research Laboratory; 2 years; \$400,000

UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; N. Lewis Buck; Renovation of Research Facilities in the Mechanical Engineering Department; 1 year; \$10,000

Peter Gray; Adaptation and Renovation of Research Laboratories in the Natural Sciences; 1 year; \$31,600

Ernst Knobil; Remodeling Research Facilities for the Department of Physiology; 2 years; \$72,000 T. W. Sze; Completion of Research Facilities in the Electrical Engineering Department; 1 year; \$5,350

UNIVERSITY OF RHODE ISLAND, Kingston; Niels Rorholm; Construction of a Computer Laboratory; 1 year; \$72,000

UNIVERSITY OF ROCHESTER, Rochester, N.Y.; J. Edward Hoffmeister; Renovation of Facilities for Research in Petrology and Paleontology; 1 year; \$5,550

E. Roy John; Renovation and New Construction of Facilities for the Center for Brain Research; 2 years; \$211,150

Edwin O. Wilg; Renovation of Laboratories for Research in Organic Chemistry; 1 year; \$14,500

UNIVERSITY OF SAN FRANCISCO, San Francisco, Calif.; Arthur Furst; Research Facilities for Institute of Chemical Biology in New Science Center; 2 years; \$50,000

UNIVERSITY OF SOUTH CAROLINA, Columbia; R. D. Edge; Construction of New Physics Research Laboratory: 1 year: \$21.000

Research Laboratory; 1 year; \$21,000
J. T. Penney; Laboratory Facilities for a
New Life Sciences Building; 1 year; \$15,200
UNIVERSITY OF SOUTHERN CALIFORNIA, Los
Angeles; Milton C. Kloetzel; Construction of
New Research Facility for Chemistry Department; 2 years; \$116,000

ment; 2 years; \$116,000
Anthony D. Lazzaro; Remodeling of a
Building for a Computer Center; 1 year;
\$42,300

\$42,30

UNIVERSITY OF TENNESSEE, Knoxville; Floyd W. Dunn, Memphis; Remodeling Laboratory Facilities for Research in Biochemistry and Microbiology; 1 year; \$8,000

UNIVERSITY OF TEXAS, Austin; W. W. Hagerty; Construction of Research Laboratories in Engineering Materials-Science; 2 years; \$200,000

B. B. Kinsey; Construction of New Laboratories for Research in Nuclear Physics; 2 years; \$300,000

Howard T. Odum, Port Aransas; Research Facilities at the Institute of Marine Science; 1 year; \$17,100

UNIVERSITY OF UTAH, Salt Lake City; Thomas J. Parmley; Graduate Facilities for Physics Department; 1 year; \$62,000

UNIVERSITY OF VERMONT, Burlington; Clinton D. Cook; Renovation of Chemistry Research Facilities; 1 year; \$45,000

UNIVERSITY OF VIRGINIA, Charlottesville; James W. Cole, Jr.; Construction of a New Building for Expansion of Research Facilities in Department of Chemistry; 3 years; \$500,000

UNIVERSITY OF WASHINGTON, Seattle; Arthur Martin; Construction of Facilities for Graduate Research in Biology in the New University of Washington Museum; 1 year; \$8,100 Earl C. Roberts; Construction of a Ma-

Earl C. Roberts; Construction of a Materials Engineering Laboratory; 2 years; \$100,000

David R. M. Scott; Construction of a New Forest Science Building; 3 years; \$100,000

R. B. Walker; Renovation of Laboratory Facilities for Research in Plant Physiology; 1 year; \$53,700

University of Wisconsin, Madison; W. J. Brogden; Research Facilities in a New Psychology Building; 2 years; \$350,000

W. R. Marshall, Jr., W. K. Neill, and W. S. Cottingham; Construction of New Research

Facilities in College of Engineering; 2 years; | Adelphi College, Garden City, N.Y.; \$6,140 \$300,000

Harold R. Wolfe; Construction of a Zoology Research Laboratory; 1 year; \$368,500 University of Wyoming, Laramie; Victor A. Ryan; Laboratory Facilities for Radiochemistry Research; 1 year; \$3,100

UTAH STATE UNIVERSITY, Logan; Melvin C. Cannon: Remodeling of Chemistry Department Research Facilities and Construction of an Adjoining Chemical Storage; 18 months; \$100,000

T. W. Daniel; Construction of Controlled Environment Facilities in the Department of Forest Management; 1 year; \$25,000

Vaughn E. Hansen; Construction of New Facilities in Water Research Laboratory: 2 years; \$200,000

VANDERBILT UNIVERSITY, Nashville, Tenn.; Louis J. Bircher and Robert T. Lagemann; Construction of a New Physical Science Center (Step I-Chemistry and Physics); 2 years; \$700,000

Karl B. Schnelle, Jr.; Renovation of Laboratory Facilities in the Chemical Engineering Department; 1 year; \$6,000

Virginia Polytechnic Institute, Blacksburg; D. H. Pletta; Construction of a Research Laboratory in Engineering Mechanics; 1 year; \$53,200

WAKE FOREST COLLEGE, Winston-Salem, N.C.; Charles S. Black and Thomas J. Turner; Adaptation and Equipping Facilities for Research in Chemistry and Physics; 1 year; \$20,000

WASHINGTON STATE UNIVERSITY, Pullman; C. M. Stevens; Laboratory Facilities for Research in the New Chemistry Building; 1 year; \$20,000

WASHINGTON UNIVERSITY, St. Louis, Mo.; E. U. Condon; Construction of the Arthur Holly Compton Research Laboratory of Physics; 2 years; \$300,000

Viktor Hamburger; Remodeling of Research Facilities in Zoology Department; 1 year; \$7,200

WAYNE STATE UNIVERSITY, Detroit, Mich.; W. V. Mayer; Fixed Equipment for Life Sciences Research Center; 1 year; \$30,000

Calvin L. Stevens; Laboratory Renovation for Nuclear Magnetic Resonance Research; 1 year; \$4,250

WEST VIRGINIA UNIVERSITY, Morgantown; Walter R. Lewis; Research Facilities for a New Biochemistry Laboratory; 2 years; \$13,000

Charles D. Thomas; Renovation of Research Facilities in the Department of Physics; 1 year; \$6,000

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio : William M. Heston ; Modernization of Graduate Biological Research Laboratory; 2 years; \$160,000

W. M. Heston; Construction of Chemical Research Laboratories, Science Center Phase I; 2 years; \$250,000

YALE UNIVERSITY, New Haven, Conn.; Dirk Brouwer; Rehabilitation of Laboratory Facilities at Yale Observatory Bethany Station; 1 year; \$26,100

### INSTITUTIONAL GRANTS FOR SCIENCE

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, College Station; \$16,866

AGRICULTURAL AND TECHNICAL COLLEGE OF NORTH CAROLINA, Greensboro; \$5,330

ALAMEDA COUNTY STATE COLLEGE, Hayward. Calif.; \$5,005

Albion College, Albion, Mich.; \$5,150 ALFRED UNIVERSITY, Alfred, N.Y.; \$5,825 AMERICAN UNIVERSITY, Washington, D.C.; \$6,040

AMHERST COLLEGE, Amherst, Mass.; \$9,975 ANTIOCH COLLEGE, Yellow Springs, Ohio: \$5,495

ARIZONA STATE UNIVERSITY, Tempe; \$8,120 ATLANTIC UNION COLLEGE, South Lancaster, Mass.; \$5,180

AUBURN UNIVERSITY, Auburn, Ala.; \$5,710 AUGSBURG COLLEGE AND THEOLOGICAL SEMI-NARY, Minneapolis, Minn.; \$3,200

AUSTIN COLLEGE, Sherman, Tex.; \$3,800 BAYLOR UNIVERSITY, Waco, Tex.; \$5,515 BEREA COLLEGE, Berea, Ky.; \$5,000

BOSTON COLLEGE, Chestnut Hill, Mass.; \$5,880

BOSTON UNIVERSITY, Boston, Mass.; \$12,970 BOWDOIN COLLEGE. Brunswick. \$5,255

BRANDEIS UNIVERSITY, Waltham, Mass.; \$33,740

BRIGHAM YOUNG UNIVERSITY, Provo, Utah; \$11,033

BROOKLYN COLLEGE, Brooklyn, N.Y.; \$6,935 Providence, BROWN UNIVERSITY, \$33,323

BRYN MAWR COLLEGE, Bryn Mawr, Pa.; \$6,755 BUTLER UNIVERSITY, Indianapolis, Ind.;

\$5,310 CALIFORNIA INSTITUTE OF TECHNOLOGY.

Pasadena; \$46,267 CANISIUS COLLEGE, Buffalo, N.Y.; \$1,700 CARLETON COLLEGE, Northfield, Minn.; \$6,095

CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; \$22,173

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio: \$16,530

CATHOLIC UNIVERSITY, Washington, D.C.; \$9,440

CENTRAL STATE COLLEGE, Wilberforce, Ohio: \$1,700

COLLEGE OF CHARLESTON, Charleston, S.C.; \$4,400

CITY COLLEGE, New York, N.Y.; \$6,280

CLARK UNIVERSITY. Worcester. \$5,801

CLEMSON COLLEGE, Clemson, S.C.; \$5,175 COE COLLEGE, Cedar Rapids, Iowa; \$5,150

COLBY COLLEGE, Waterville, Maine; \$5,120 COLGATE UNIVERSITY, Hamilton, \$5,980

COLOBADO COLLEGE, Colorado Springs; \$5,400 COLORADO SCHOOL OF MINES, Golden; \$6,290 COLUMBIA UNIVERSITY, New York, N.Y.; \$50,000

COLORADO STATE UNIVERSITY, Fort Collins; \$15,225

CONNECTICUT COLLEGE, New London; \$2,500, ILLINOIS STATE NORMAL UNIVERSITY, Normal; \$5,100 CORNELL COLLEGE, Mount Vernon, Iowa: \$4,500 CORNELL UNIVERSITY, Ithaca, N.Y.; \$50,000 ton; \$3,900 CREIGHTON Nebr.; UNIVERSITY, Omaha, \$2,000 N.H.; DARTMOUTH COLLEGE. Hanover. \$32,924 DENISON UNIVERSITY. Granville. Ohio: Md.; \$48,331 \$3,150 DEPAUL UNIVERSITY, Chicago, Ill.; \$5,505 ria: \$5,705 UNIVERSITY, Greencastle, Ind.; Kansas \$1,200 \$11,075 DICKINSON COLLEGE, Carlisle, Pa.; \$5,570 DREXEL INSTITUTE OF TECHNOLOGY, Philadelphia, Pa.; \$5,025 ton; \$14,305 DUKE UNIVERSITY, Durham, N.C.; \$32,415 DUMBARTON COLLEGE OF HOLY CROSS, Washington, D.C.; \$2,400 DUQUESNE UNIVERSITY, Pittsburgh, Pa. ; \$6,253 EARLHAM COLLEGE, Richmond, Ind.; \$6,600 ELMIRA COLLEGE, Elmira, N.Y.; \$5,005 LEHICH \$11,900 EMORY UNIVERSITY, Atlanta, Ga.; \$8,168 ENDOWMENT AND RESEARCH FOUNDATION at Montana State College, Bozeman; \$6,695 \$3,400 Evansville, EVANSVILLE COLLEGE, \$5,165 FLORIDA PRESBYTERIAN COLLEGE, St. Peters-Oreg.; \$6,160 burg; \$5,385 Calif.; \$5,044 FLORIDA STATE UNIVERSITY, Tallahassee; \$17,914 FORDHAM UNIVERSITY, New York, N.Y.; \$6,184 FRANKLIN AND MARSHALL COLLEGE, Lancaster, Pa.; \$7,090 Calif.; \$6,645 FREDERIC BURK FOUNDATION FOR EDUCATION, San Francisco, Calif.; \$6,460 \$13,676 FURMAN UNIVERSITY. S.C.: Greenville. \$4,600 GALLAUDET COLLEGE, Washington, D.C. : \$5,080 \$5,200 LUBBOCK GEORGE WASHINGTON UNIVERSITY, Washing-Tex.; \$5,010 ton, D.C.; \$8,840 GEORGETOWN UNIVERSITY, Washington, D.C.; \$3,825 \$6,580 GEORGIA INSTITUTE OF TECHNOLOGY, At-Ind.; \$5,380 lanta; \$19,605 GOSHEN COLLEGE, Goshen, Ind.; \$2,900 \$6,340 GOUCHER COLLEGE, Baltimore, Md.; \$6,770 GRINNELL COLLEGE, Grinnell, Iowa; \$6.685 HARNEMANN MEDICAL COLLEGE AND HOSPI-\$11,220 TAL, Philadelphia, Pa.; \$7,151 HAMILTON COLLEGE, Clinton, N.Y.; \$5,065 HARVARD UNIVERSITY, Cambridge, Mass.; \$50,000 \$5,550 HARVEY MUDD COLLEGE, Claremont, Calif.; \$5,300

HOLLINS COLLEGE, Hollins College,

IDAHO STATE COLLEGE, Pocatello: \$5.625

\$5,115

\$8,229

cago; \$12,355

ILLINOIS WESLEYAN UNIVERSITY, Blooming-INDIANA UNIVERSITY, Bloomington; \$31,941 IOWA STATE UNIVERSITY, Ames; \$22,322 JEFFERSON MEDICAL COLLEGE OF PHILADEL-PHIA, Philadelphia, Pa.; \$4,000 JOHNS HOPKINS UNIVERSITY, Baltimore, KANSAS STATE TEACHERS COLLEGE, Empo-STATE UNIVERSITY, Manhattan; KENT STATE UNIVERSITY, Kent, Ohio; \$6,155 KENTUCKY RESEARCH FOUNDATION, Lexing-Kenyon College, Gambier, Ohio; \$5,065 LAFAYETTE COLLEGE, Easton, Pa.; \$5,178 LAMAR STATE COLLEGE OF TECHNOLOGY, Beaumont, Tex.; \$5,022 LAWRENCE COLLEGE, Appleton, Wis.; \$5,955 UNIVERSITY. Bethlehem, LEMOYNE COLLEGE, Syracuse, N.Y.; \$1,800 LINCOLN UNIVERSITY, Jefferson City, Mo.; LINFIELD RESEARCH INSTITUTE, McMinnville, LOMA LINDA UNIVERSITY, Loma Linda, LONG BEACH STATE COLLEGE FOUNDATION, Long Beach, Calif.; \$6,880 LONGWOOD COLLEGE, Farmville, Va.; \$5,155 LOS ANGELES STATE COLLEGE, LOS Angeles. LOUISIANA STATE UNIVERSITY, Baton Rouge, LOYOLA UNIVERSITY, Chicago, Ill.; \$5,675 LOYOLA UNIVERSITY, New Orleans, La.; CHRISTIAN COLLEGE, Lubbock, MACALESTER COLLEGE, St. Paul, Minn.; MANCHESTER COLLEGE, North Manchester, MANHATTAN COLLEGE, New York, N.Y.; MANKATO STATE COLLEGE FOUNDATION, INC., Mankato, Minn.; \$2,400 MARQUETTE UNIVERSITY, Milwaukee, Wis.; MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; \$50,000 MEDICAL COLLEGE OF VIRGINIA, Richmond; MIAMI University, Oxford, Ohio; \$5,920 MICHIGAN STATE UNIVERSITY, East Lansing; HAVERFORD COLLEGE, Haverford, Pa.; \$6,460 \$32,318 MIDDLEBURY COLLEGE, Middlebury, Vt.; \$5,100 HOWARD UNIVERSITY, Washington, D.C.: MILLS COLLEGE, Oakland, Calif.; \$5,190 MISSISSIPPI STATE UNIVERSITY, State College; \$5,100 ILLINOIS INSTITUTE OF TECHNOLOGY, Chi-MONTANA STATE UNIVERSITY, Missoula; \$7,826

MOUNT HOLYOKE COLLEGE, South Hadley, RUTGERS. THE STATE UNIVERSITY, New Mass.; \$6,515 Brunswick, N.J.; \$27,710 SACRAMENTO STATE COLLEGE FOUNDATION, MUHLENBERG COLLEGE, Allentown, Pa.; \$3,200 Sacramento, Calif.; \$5,305 NEBRASKA STATE TEACHERS COLLEGE, Chad-ST. BONAVENTURE UNIVERSITY, St. Bonaventure, N.Y.; \$4,500 ron; \$5,100 ST. JOHN'S UNIVERSITY, Jamaica, N.Y.; NEW MEXICO INSTITUTE OF MINING AND \$5,350 TECHNOLOGY, Socorro; \$7,925 ST. LAWRENCE UNIVERSITY, Canton, N.Y.; NEW MEXICO STATE UNIVERSITY, University \$5,400 Park; \$7,470 ST. LOUIS UNIVERSITY, St. Louis, Mo.,; COLLEGE OF NEW ROCHELLE, New Rochelle, \$9,080 N.Y.; \$400 ST. MARY'S COLLEGE, Winona, Minn.; \$4,000 NEW YORK UNIVERSITY, New York; \$42,027 ST. MARY'S COLLEGE OF CALIFORNIA, St. NORFOLK COLLEGE OF WILLIAM AND MARY, Mary's College; \$4,500 Norfolk, Va. ; \$5,060 ST. MARY'S UNIVERSITY OF SAN ANTONIO, NORTH DAKOTA STATE UNIVERSITY, Fargo; San Antonio, Tex.; \$5,250 \$6,745 ST. OLAF COLLEGE, Northfield, Minn.; \$5,295 NORTH GEORGIA COLLEGE, Dahlonega; \$5,175 ST. PETER'S COLLEGE, Jersey City, N.J.; NORTHEASTERN UNIVERSITY, Boston, Mass.; \$3,400 \$8,225 SAN DIEGO STATE COLLEGE FOUNDATION, San NORTHERN ILLINOIS UNIVERSITY, De Kalb; Diego, Calif.; \$9,345 \$5,030 SAN FERNANDO VALLEY STATE COLLEGE NORTHWEST NAZARENE COLLEGE, Nampa, FOUNDATION, Northridge, Cailf.; \$6,280 Idaho; \$5,935 SAN JOSE STATE COLLEGE FOUNDATION, San NORTHWESTERN UNIVERSITY, Evanston, Ill.; Jose, Calif.; \$5,850 \$36,376 SEATTLE PACIFIC COLLEGE INSTITUTE FOR OBERLIN COLLEGE, Oberlin, Ohio; \$6,495 RESEARCH, Seattle, Wash.; \$3,500 OCCIDENTAL COLLEGE, Los Angeles, Calif.; \$5.085 OHIO STATE UNIVERSITY, Columbus; \$38,741 \$5,755 OHIO UNIVERSITY, Athens; \$5,980 OHIO WESLEYAN UNIVERSITY, Delaware; \$6,945 OKLAHOMA STATE UNIVERSITY, Stillwater; \$11,565 ORANGE COUNTY STATE COLLEGE FOUNDA-TION, Fullerton, Calif.; \$5,120 STANFORD STATE UNIVERSITY. CORVALLIS: \$50,000 OREGON \$33,706

SMITH COLLEGE, Northampton, Mass.; \$7,828 SOUTH DAKOTA STATE COLLEGE, Brookings; SOUTHERN ILLINOIS UNIVERSITY, Carbondale; \$13,208 SOUTHERN METHODIST UNIVERSITY, Dallas, Tex.; \$6,980 SOUTHERN MISSIONARY COLLEGE, Collegedale. Tenn.; \$6,250 UNIVERSITY, Stanford, Calif.; STATE UNIVERSITY OF IOWA, IOWA City; \$14,740 PAN AMERICAN COLLEGE, Edinburg, Tex.; \$5,050 STATE UNIVERSITY OF SOUTH DAKOTA, Ver-PENNSYLVANIA STATE UNIVERSITY, Univermillion; \$6,180 sity Park; \$42,299 STEPHEN F. AUSTIN STATE COLLEGE, Nacog-Periffer COLLEGE, Misenheimer, N.C.; doches, Tex.; \$5,125 \$5,300 POLYTECHNIC INSTITUTE OŁ BROOKLYN, boken, N.J.; \$7,923

STEVENS INSTITUTE OF TECHNOLOGY, Ho-Brooklyn, N.Y.; \$9,889 SWARTHMORE COLLEGE, Swarthmore, Pa.; POMONA COLLEGE, Claremont, Calif.; \$6,955 \$6,945 SYRACUSE UNIVERSITY, Syracuse, PORTLAND STATE COLLEGE, Portland, Oreg.; \$21,160 \$5,670 TEMPLE UNIVERSITY, Philadelphia, Pa.; PRINCETON, UNIVERSITY, Princeton, N.J.; \$9,525 \$50,000 TEXAS CHRISTIAN UNIVERSITY, Fort Worth: Principia College, Elsah, Ill.; \$5,363 \$5,010 PURDUE RESEARCH FOUNDATION, Lafayette, TEXAS SOUTHERN UNIVERSITY, Houston; Ind.; \$48,645 \$5,300 REED COLLEGE, Portland, Oreg.; \$7,414 TEXAS TECHNOLOGICAL COLLEGE, Lubbock; RENSSELAER POLYTECHNIC INSTITUTE, Troy, \$6,091 N.Y.; \$19,215 TEXAS WOMAN'S UNIVERSITY, Denton: RESEARCH FOUNDATION OF STATE UNIVER-\$3,625 SITY OF NEW YORK, Albany; \$18,171 THIEL COLLEGE, Greenville, Pa.: \$4.700 ROCKEFELLER INSTITUTE, New York, N.Y.; TRINITY COLLEGE, Hartford, Conn.; \$5,020 \$14,008 TUFTS UNIVERSITY, Medford, Mass.: \$10.270 ROLLINS COLLEGE, Winter Park, Fla.: \$5,250 TULANE UNIVERSITY, New Orleans, La.: ROOSEVELT UNIVERSITY, Chicago, Ill.: \$5,225 \$21,943 ROSE POLYTECHNIC INSTITUTE, Terre Haute, Union College & University, Schenectady, Ind.; \$5,600 N.Y.; \$4,000

University of Akron, Akron, Ohio; \$6,080 UNIVERSITY OF ALABAMA, University; \$6,255 UNIVERSITY OF ALASKA, College; \$24,492 UNIVERSITY OF ARIZONA, Tucson: \$38,141 TINIVERSITY OF ARKANSAS, Fayetteville; \$8,389 BUFFALO, Buffalo, N.Y.; UNIVERSITY OF \$11.040 UNIVERSITY CALIFORNIA. Berkeley: OF \$50,000 University of California, Davis; \$23,080 University of California, Los Angeles; \$50,000 Riverside: UNIVERSITY OF CALIFORNIA. \$14,335 University of California, San Diego; \$50,000 University of California, San Francisco; \$11,033 University of California, Santa Barbara; UNIVERSITY OF CHICAGO, Chicago, \$50,000 Cincinnati, UNIVERSITY OF CINCINNATI. Ohio; \$8,775 UNIVERSITY OF COLORADO, Boulder; \$27,826 University of Connecticut, Storrs; \$9,108 University of Dayton, Dayton, Ohio; \$5,740 University of Delaware, Newark; \$10,936 UNIVERSITY OF DENVER RESEARCH INSTI-TUTE, Denver, Colo.; \$6,755 UNIVERSITY OF FLORIDA. Gainesville: \$29.523 University of Georgia, Athens; \$17,020 UNIVERSITY OF HAWAII, Honolulu: \$15,190 UNIVERSITY OF HOUSTON, Houston, Tex.; \$9.333 UNIVERSITY OF IDAHO, MOSCOW; \$7,053 University of Illinois, Urbana; \$50,000 University of Kansas, Lawrence; \$27,822 UNIVERSITY OF KANSAS CITY, Kansas City, Mo.; \$5,140 UNIVERSITY OF LOUISVILLE, Louisville, Ky.; \$11,825 UNIVERSITY OF MAINE, Orono; \$6,520 UNIVERSITY OF MARYLAND, College Park; \$16,826 UNIVERSITY OF MASSACHUSETTS, Amherst; \$11,825 UNIVERSITY OF MIAMI, Coral Gables, Fla.; \$18,198 UNIVERSITY OF MICHIGAN, Ann Arbor: \$50,000 University of Minnesota, Minneapolis; \$50,000 MISSISSIPPI, University; UNIVERSITY OF \$6,255 University of Missouri, Columbia; \$19,254 UNIVERSITY OF NEBRASKA, Lincoln; \$14,364 UNIVERSITY OF NEVADA, Reno; \$8,655 University of New Hampshire, Durham; \$6.550 University of New Mexico, Albuquerque; \$10,430 University of North Carolina, Chapel

University of North Carolina, Raleigh; \$16,980 University of North Dakota, Grand Forks: \$8,330 UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; \$17,000 University of Oklahoma Research Insti-TUTE, Norman; \$23,148 University of Oregon, Eugene; \$30,910 OF THE PACIFIC, Stockton, UNIVERSITY Calif.; \$6,615 University of Pennsylvania, Philadelphia; \$50,000 University of Pittsburg, Pittsburgh, Pa.; \$26.980 University of Portland, Portland, Oreg.; \$3,100 UNIVERSITY OF PUERTO RICO, Rio Piedras; \$5,130 University of Puget Sound Research In-STITUTE. Tacoma. Wash.: \$5,040 University of Rhode Island, Kingston; \$9,730 UNIVERSITY OF ROCHESTER, Rochester, N.Y.; \$22.848 University of San Francisco, San Francisco, Calif.; \$5,680 University of South Carolina, Columbia; \$8,100 UNIVERSITY OF SOUTH FLORIDA, Tampa; \$5,160 University of Southern California, Los Angeles: \$30,513 UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette; \$5,700 TENNESSEE, Knoxville: UNIVERSITY OF \$16,520 University of Texas, Austin; \$49,742 UNIVERSITY OF TULSA, Tulsa, Okla.; \$800 UNIVERSITY OF UTAH, Salt Lake City; \$19,000 University of Vermont, Burlington; \$8,205 University of Virginia, Charlottesville: \$10,694 WASHINGTON. Seattle; UNIVERSITY OF \$50,000 UNIVERSITY OF WICHITA, Wichita, Kans.; \$5,271 University of Wisconsin, Madison; \$50,000 University of Wyoming, Laramie; \$5,080 UTAH STATE UNIVERSITY, Logan; \$7,455 VALPARAISO UNIVERSITY, Valparaiso, Ind.; \$5,510 VANDERBILT UNIVERSITY, Nashville, Tenn.; \$16,395 VASSAR COLLEGE, Poughkeepsie, N.Y.; \$5,485 Villanova. Pa.: VILLANOVA UNIVERSITY. \$5,705 VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg; \$8,925 WABASH COLLEGE, Crawfordsville, Ind.; \$5,135 WARNER PACIFIC COLLEGE, Portland, Oreg.; \$5,110 WASHINGTON & LEE UNIVERSITY, Lexington, Va.: \$5,135

WASHINGTON STATE UNIVERSITY, Pullman;

\$18,011

Hill: \$18,093

\$28.983

WAYND STATE UNIVERSITY, Detroit, Mich.; \$15,134

Wellesley College, Wellesley, Mass.; \$2,700

WELLS COLLEGE, Aurora, N.Y.; \$2,600

WESLEYAN UNIVERSITY, Middletown, Conn.;

WESTERN ILLINOIS UNIVERSITY. Macomb: \$4,700

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; \$20,576

WESTERN WASHINGTON STATE COLLEGE, Bellingham; \$5,100

WEST VIRGINIA UNIVERSITY, Morgantown; \$9,717

WHITMAN COLLEGE, Walla Walla, Wash.; WHITWORTH COLLEGE. Spokane. Wash.:

\$5,855 WILKES COLLEGE, Wilkes-Barre, Pa.; \$5,063

WILLIAMETTE UNIVERSITY, Salem, Oreg.:

COLLEGE OF WILLIAM & MARY, Williamsburg, Va.; \$5,815

WILLIAM MARSH RICE UNIVERSITY, Houston. Tex.; \$12,454

WILLIAMS COLLEGE, Willamstown, Mass.; \$5,460

WILSON COLLEGE, Chambersburg, Pa.: \$5,360 WINONA STATE COLLEGE, Winona, Minn.;

WINTHROP COLLEGE, Rock Hill, S.S.; \$1,000 WITTENBERG UNIVERSITY, Springfield, Ohio; \$5,025

Wofford COLLEGE. Spartanburg. S.C.: \$4.300

WOMAN'S MEDICAL COLLEGE OF PENNSYL-VANIA, Philadelphia; \$5,060

WORCESTER POLYTECHNIC INSTITUTE, Worcester, Mass.; \$5,140

YALE UNIVERSITY, New Haven, Conn.; \$50,000

YESHIVA UNIVERSITY, New York, N.Y.; \$19,308

## INTERNATIONAL SCIENCE **ACTIVITIES**

AFRICAN-AMERICAN INSTITUTE. New York, N.Y.; Donald W. Wyatt; Travel of Foreign Participants in Summer Institutes, 1962; 5 months; \$7,770

AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; Hans Nussbaum; Administration of Panels in Assistance to the U.S.-Japan Committee on Scientific Cooperation; 1 year; \$25,000

Dael Wolfie; A Compilation of Arid Lands Research Report, and U.S. Participation in the UNESCO Conference on Arid Lands in Latin America; 18 months; \$40,000

AMERICAN FRIENDS OF THE MIDDLE EAST, INC., Washington, D.C.; Virgil C. Crippin; Travel of Foreign Participants in Summer Institutes, 1962; 5 months; \$1,600

ASIA FOUNDATION, San Francisco, Calif.; Edith Coliver; Travel of Foreign Participants in Summer Institutes, 1962; 5 months; \$13,250

WASHINGTON UNIVERSITY, St. Louis, Mo.: ! CENTRE NATIONAL DE LA RECHERCHE SCIEN-TIFIQUE, Paris, France; J. Coulomb; Participation of U.S. Scientists in C.N.R.S.pation of U.S. Scientists in C.N.R.S.-Sponsored Scientific Workshops; 1 year; \$20,000

> COMISION NACIONAL DE ENERGIA ATOMICA. Buenos Aires, Argentina; Jorge A. Sabato; Study of the Influence of the Substructures of Polygonization Occurring in the Gamma-Beta Transformation on the Creep Resistance Uranium-Chromium Alloys; 1 year; \$12,000

> LA PLATA NATIONAL UNIVERSITY. La Plata. Argentina; Rafael Grinfeld; Spectroscopy of Light Molecules; 2 years; \$36,300

> NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; Wallace W. Atwood, Jr.; Exchange of Scientists Between the U.S. and U.S.S.R.; \$45,675
> W. M. Todd; Interim Support of the Office

> of the Foreign Secretary: 3 months: \$23,800 ORGANIZATION OF AMERICAN STATES, Washington, D.C.; Jesse D. Perkinson, Jr.; Regional Seminar for Latin America on Educational Problems of Nuclear Energy; 6 months: \$7.000

> PAN AMERICAN UNION, Washington, D.C.; Jesse D. Perkinson, Jr.; Travel of Foreign Participants in Summer Institutes, 1961: 5

> months; \$5,000
> Jesse D. Perkinson, Jr.; Inter-American Program for Improvement of Science Education; 1 year; \$32,500

> STANFORD UNIVERSITY, Stanford, Calif.; O. Cutler Shepard; Point Defects in Crystalline Solids and Their Role in Phenomena Involving Atomic Mobility; 2 years; \$95,200 U.S.-SOUTH AFRICA LEADER EXCHANGE PRO-

> GRAM, INC., Philadelphia, Pa.; Frank S. Loescher; Travel of Foreign Participants in Summer Institutes, 1962; 5 months: \$3,270 Universidad Nacional Autonoma de Mex-

> ICO, Mexico, D. F. Mexico; Marcos Moshin-Sky; Participation of United States Scientists in the Latin American School of Physics; 6 months; \$7,500

> University of California, Berkeley, Calif.; Robert L. Thornton, Livermore; Theory of Elementary Particles; 9 months; \$4,400

#### SCIENCE **EDUCATIONAL** DEVELOPMENT **GRANTS**

HAROLD BLOOM; Colorado School of Mines; 10 weeks; \$1,375

SYDNEY S. BREESE, JR.; Plum Island Animal Disease Laboratory; 20 weeks; \$1,862

William B. Cook; 26 weeks; \$2,557

BERNARD D. CULLITY; University of Notre Dame; 26 weeks; \$2,484

FRED W. DECKER; Oregon State University; 12 weeks; \$1,734

JOHN G. Fox; Carnegie Institute of Technology; 26 weeks; \$2,385

SAMUEL B. Guss; Pennsylvania State University: 23 weeks: \$2,984

WILLIAM F. HORNYAK; University of Maryland; 26 weeks; \$2,447

DANIEL J. JONES; University of Utah; 18 weeks: \$1.759

ARNULF MUAN; Pennsylvania State University: 26 weeks: \$2,486

WILLIAM P. STEPHEN; Oregon State University; 12 weeks; \$1,738

LAURENCE E. STRONG: Earlham College; 26 weeks; \$2,398

CARL R. WISCHMEYER; William Marsh Rice University: 8 weeks: \$1,299

CARL R. ZIMMER; Arizona State University; 15 weeks: \$1,719

#### GRANTS TO ATTEND NATO ADVANCED INSTITUTES

CLARENCE G. GOLUEKE; University of California: \$875

ROBERT M. KOCH; University of Nebraska;

WILLIAM J. OSWALD; University of California: \$875

ROBERT M. PORTER; New Mexico State University: \$410

ALLAN R. ROBINSON: Harvard University; \$450

FELIX M. H. VILLARS; Massachusetts Institute of Technology; \$470

## SCIENCE EXHIBITS

University of Washington, Seattle; Otto N. Larsen; An Assessment of the United States Science Exhibit, Century-21 Exposition; 18 months; \$75,060

## SCIENCE RESOURCES PLANNING

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; G. B. Kistiakowsky; Special Studies of Research Needs: 6 months: \$25,025

# DISSEMINATION OF SCIENTIFIC INFORMATION

## **DOCUMENTATION RESEARCH**

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Charles W. Shilling; Study of Communication Channels in Biology; 9 months; \$25,300

ASSOCIATION OF SPECIAL LIBRARIES AND IN-FORMATION BURBAUX, London, England; Cyril W. Cleverdon, Cranfield; In Investigation into the Performance Characteristics of Indexing Techniques; 2 years; \$61,000

CAMBRIDGE LANGUAGE RESEARCH UNIT, Cambridge, England; Roger M. Needham; New Techniques for Classification: The Theory of Clumps; 1 year; \$17,500

ENGINEERS JOINT COUNCIL, New York, N.Y.; L. K. Wheelock; Study of Engineering Ter-minology and Relationships Among Engineering Terms; 1 year; \$43,955

HARVARD UNIVERSITY, Cambridge, Mass.; Anthony G. Oettinger; Research on Auto-matic Translation and Mathematical Linguistics; 1 year; \$160,160

LEHIGH UNIVERSITY, Bethlehem, Pa.; Donald J. Hillman; Study of Theories and Models of Information Storage and Retrieval; 2 years; \$6,600

MASSACHUSSETS INSTITUTE OF TECHNOLOGY, Cambridge; Victor H. Yngve; Basic Research on Language Problems in Mechanical Translation; 18 months; \$225,000

Lexington: Technical Information System; 1 year: \$46,000

NATIONAL BIOCHEMICAL RESEARCH FOUNDA-TION, New York, N.Y.; Robert S. Ledley; New Coordinate Indexing Method for Bound Book Form Bibliographies: 6 months: \$6,218

NATIONAL BIOMEDICAL RESEARCH FOUNDA-TION, Silver Spring, Md.; Robert S. Ledley; New Coordinate Indexing Method for Bound Book Form Bibliographies; 8 months; \$600

OHIO STATE UNIVERSITY RESEARCH FOUNDA-TION, Columbus; William S-Y Wang; Research on Syntactic Analysis; 2 years; \$40,000

U.S. DEPARTMENT OF COMMERCE, NATIONAL BUREAU OF STANDARDS, Washington, D.C.; Samuel N. Alexander : Research Information Center and Advisory Service on Informa-

Robert D. Elbourn; Research in Picture Processing Operations; 1 year; \$73,000

University of Pennsylvania, Philadelphia; Zellig S. Harris; Continued Support of Research on Linguistic Transformations Information Retrieval; 2 years; \$346,000

University of Texas, Austin; Winfred P. Lehmann; Development of a Linguistic Computer System; 1 year; \$95,000

University of Washington, Seattle; Erwin Reifler; A Chinese-English Mechanical Translation Project for Research in the Lewicographical and Structural Problems of the Chinese Language; 4 months; \$1,000

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; Allen Kent; Test Program for Evaluating Procedures for the Exploitation of Literature of Interest to Metallurgists; 6 months; \$10,169
Allen Kent and Jessica Melton; Automa-

tic Processing of Metallurgical Abstracts for the Purpose of Information Retrieval; 1 year; \$54,000

## FOREIGN SCIENCE INFORMATION

METALLURGICA, Schnectady, John H. Hollomon; An English Edition of the Russian Abstract Journal-Metallurgy; 1 year; \$17,224
John H. Hollomon; The Translation and

Publication of the 1959 Issues of The Physics of Metals and Metallography, and the Journal of Abstracts-Metallurgy, Parts A and B; 1 year; \$13,850

John H. Hollomon; Translation and Publication of the 1961 Issues of Two Russian Journals: The Physics of Metals and Metallography, and Abstracts-Metallurgy, Part A; 1 year; \$51,356

John H. Hollomon; Translation and Publication of the 1961 Issues of Three Russian Journals: Metallurg, MiTOM, and Ogneu-

pory; 1 year; \$47,600

John H. Hollomon; Translation and Publication of the 1960 Issues of the Russian Journal of Abstracts-Metallurgy, Part B; 1 year; \$47,667

John H. Hollomon; Translation and Publication of the 1961 Issues of the Russian Journal of Abstracts-Metallurgy, Part B; 1 year; \$47,767

AMERICAN CHEMICAL SOCIETY, Washington, Language Problems in Mechanical Trans-tion; 18 months; \$225,000

William N. Locke and Myer M. Kessler, Russian Scientific Journals; 1 year; \$1,914 AMBRICAN COUNCIL OF LEARNED SOCIETIES, New York, N.Y.; Gordon B. Turner; ACLS-OTS Translations Distribution Program; 1 year; \$19,636

AMERICAN GEOGRAPHICAL SOCIETY, New York, N.Y.; Charles B. Hitchcock; Translation and Publication of Soviet Geography: Review and Translation, for Calendar Year 1962; 1 year; \$22,478

AMBRICAN GEOGRAPHICAL UNION, Washington, D.C.; Waldo E. Smith; Acquisition and Evaluation of Geophysics Material from Iron Curtain Countries in Asia and Europe; 1 year; \$24,680

Waldo E. Smith; Translation and Publication of the 1961 Issues of the Russian Journal, Geodesy and Cartography; 1 year;

\$24,680

Waldo E. Smith; Translation and Publication of the Trudy of The Hydrophysical Institute of the Sea and The Marine Sciences Articles in Doklady of The Academy of Sciences of the USSR; 1 year; \$16,000

Waldo E. Smith; Translation and Publication of The 1962 Issues of Izvestiya, Geo-

physics Series; 1 year; \$53,670

WALDO E. SMITH; Translation and Publication of the 1962 Issues of the Russian Journal, Geodesy and Cartography; 1 year; \$14.450

Waldo E. Smith; Translation and Publication of the 1961, and One-half of the 1962 Issues of the Russian Journal, Geomagnetism and Aeronomy; 18 months; \$32.880

Waldo E. Smith; Translation and Publication of an English Edition of Selected Soviet Hydrologic Papers; 1 year; \$19,235 AMBRICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Francis C. Harwood; Translation and Publication of the 1961 Issues of the Russian Journal, Entomological Review; 1 year; \$27,187

Francis C. Harwood; Translation and Publication of the 1961 Issues of Four Russian Journals: Doklady-Biological Sciences; Doklady-Botanical Sciences; Microbiology; and Plant Physiology; 1 year; \$106,699

Francis C. Harwood; Translation and Publication of the 1961 Issues of the Russian Journal, Doklady—Biochemistry Section; 1 year; \$12.810

Francis C. Harwood; Translation and Publication of the 1961 Issues of the Russian Journal, Soviet Soil Sciences and the Inclusion of Doklady—Soil Sciences Section; 1 year; \$53,648

Charles W. Shilling; Translation and Publication of Three Russian Biological Monographs; 1 year; \$24,248

AMBRICAN INSTITUTE OF CHEMICAL ENGINEERS, New York, N.Y.; F. J. Van Antwerpen; Translation and Publication of an International Chemical Engineering Quarterly Journal; 1 year; \$56,622

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS, New York, N.Y.; N. S. Hibshman; Translation and Publication of the Remaining 1961 Issues of Three Russian Journals: Radio Engineering; Radio Engineering and Electronics; and Telecommunications; 9 months; \$86,250

AMERICAN INSTITUTE OF PHYSICS, New York, N.Y.; Elmer Hutchisson; Dissemination of the Japanese Journal of Applied Physics in the United States; 2 years; \$14,950

Wallace Waterfall; Translation and Publication of the 1961 Issues of Eight Russian Journals: Acoustics; Astronomy; Technical Physics; Solid State Physics; Jetp; Uspekhi; Crystallography; and Physics Section; Doklady; 1 year; \$196,550

AMERICAN MATHEMATICAL SOCIETY, Providence, R.I.; Gordon L. Walker; Provide Russian and Related Mathematical Literature for Abstracting and Research Libraries; 1 year; \$28,647

Gordon L. Walker; Translation and Pub-Ucation of the 1960 and 1961 Issues of the Chinese Journal, Acta Mathematica Sinica; 1 year; \$29,270

Gordon L. Walker; Translation and Publication of the 1961 Issues of the Russian Journal, Soviet Mathematics—Doklady; 1 year; \$37,746

Gordon L. Walker; Program for Selected Translations of Mathematical Research Articles from the Russian and Other Languages; 1 year; \$54,105

AMBRICAN PHILOSOPHICAL ASSOCIATION, Princeton, N.J.; Rose Rand; Translation and Critique of Selected Works of Leading Polish Logicians; 1 year; \$8,100

AMERICAN ROCKET SOCIETY INC., New York, N.Y.; James J. Harford; Selected Translations of Russian Material in The Field of Astronautics; 1 year; \$56,770

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, N.Y.; Jos. Sansone; Translation and Publication of Volume 26, 1962 Journal of Applied Mathematics and Mechanics (PMM); 1 year; \$30,800

ARCTIC INSTITUTE OF NORTH AMERICA, Washington, D.C.; Henry N. Michael, Temple University; Translation and Publication of Anthropology of the North: Translations from Russian Sources; 1 year; \$37,612

Bernice P. Bishop Musbum, Honolulu, Hawaii; Edwin H. Bryan, Jr.; Pacific Science Information Center; 1 year; \$17,405
Brown University, Providence, R.I.; Robert T. Beyer; Critical Study and Review of Current Work in Ultrasound and Its Physical Applications in Soviet, Satellite, and Western European Laboratories; 1 year; \$6,100
Center for Applied Linguistics of the Modern Language Association, Washington, D.C.; Harvey Sobelman; Investigation of the Nature and Problems of Information Services in Linguistics and Related Fields; 1 year; \$8,885

COLUMBIA UNIVERSITY, New York, N.Y.; Vladimir Slamecka; Study of the Resources of Scientific Information in Uzechoslovakia and the German Democratic Republic; 3 months; \$3,624

ENGINEERS JOINT COUNCIL, New York, N.Y.; L. K. Wheelock; Preparation and Publication of a Pilot Study on the Availability of Foreign Engineering Literature in the United States; 1 year; \$38,050

GEOCHEMICAL SOCIETY, La Jolla, Calif.; Earl Ingerson, University of Texas; Translation and Publication of the 1960 Issues of the Russian Journal, Geochemistry; 1 year; \$2,250

Earl Ingerson, University of Texas; Continued Support of an English Edition of the Russian Journal, Geochemistry; 18 months; \$2,470

Earl Ingerson, University of Texas; Translation and Publication of the 1961 Issues of the Russian Journal, Geochemistry; 1 year; \$28.000

INDIANA UNIVERSITY FOUNDATION, Bloomington; Thomas A. Sebeok; Preparation and Publication of a Volume on Current Trends in Russian and East European Linguistics; 2 years; \$14,950

Thomas A. Sebeok; Standing Committee on the Dissemination of Russian and East European Linguistic Literature; 1 year; \$1,380

INSTRUMENT SOCIETY OF AMERICA, Pitts-burgh, Pa.; William H. Kushnick; Translation and Publication of the 1961 Issues of Russian Journals: Automation and Remote Control; Industrial Laboratory; Instruments and Experimental Techniques; and Measurement Techniques; 1 year; \$127,500 William H. Kushnick; Translation and

Publication of the 1962 Issues of Four Russian Journals: Automation and Remote Control; Industrial Laboratory; Instruments and Experimental Techniques; and Measurement Techniques; 1 year; \$112,775

JAPAN DOCUMENTATION SOCIETY, Tokyo, Japan; Haruo Ootuka; Revision and Up-dating of the Kerr Report "Science Information Services in Japan"; 59 weeks; \$2,101

LEHIGH UNIVERSITY, Bethlehem, Pa.; Josef Brozek; Appraisal of Contemporary Russian and East European Information in Psychology and Related Areas; 3 years; \$29,875

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; William N. Locke; Acquisitions and Servicing of Current Communist Chinese Serials; 1 year; \$23,425

MIDWEST INTER-LIBRARY CENTER, Chicago, Ill.; Gordon R. Williams; Operation of the Scientific Journals Center; 1 year; \$907

Gordon R. Williams; Partial Support of Operation of the Scientific Journals Center; 8 months; \$44,303

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; A. Establier; Expansion and Improvement of Directories of Scientific Institutions and Scientists in Latin America; 2 years; \$27.014

Lawrence Krader, American University; Preparation and Publication of a New Edition of the International Directory of Anthropologists; 15 months; \$20,270

Robert C. Stephenson; Translation and Publication of the 1961 Issues of Two Russian Journals; Doklady and Izvestiya—Geology Series; 1 year; \$69,454

Robert C. Stephenson; Translation and Publication of the International Geology Review, Volume IV, 1962, and Soviet Geology 1961 Volume Year; 1 year; \$75,176 NATIONAL DIET LIBRARY OF JAPAN, Tokyo; Takao Suzuki; Translation and Printing of the Japanese Periodicals Index, Natural Sciences Section; 1 year; \$21,116

OPTICAL SOCIETY OF AMERICA, Washington, D.C.; Mary E. Warga; Translation and Editing of the 1962 Issues of the Russian Journal, Optics and Spectroscopy; 1 year; \$17,250

Scientific and Technical Journals in Latin America: 1 year: \$15,520

SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS, Philadelphia, Pa.; I. E. Block; Translation and Publication of the 1961 Issues of the Russian Journal, Theory of Probability and Its Applications; 1 year; \$2,589

SYRACUSE UNIVERSITY RESEARCH INSTITUTE, Syracuse, N.Y.; Warren B. Walsh; User Study of Translated Soviet Scientific Journals; 1 year; \$19,320

Union of International Associations, Brussels, Belgium; G. P. Speeckaert; Compilation and Publications of (1) A Monthly Current List and (2) An Annual Bibliog-raphy of International Conference Proceedings; 1 year; \$9,825

U.S. DEPARTMENT OF AGRICULTURE LIBRARY, Washington, D.C.; Foster E. Mohrhardt; Study of the Availability and Utilization of Oriental Scientific Publications in the USDA Library; 1 year; \$26,700

U.S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS, Washington, D.C.; Frederick A. Leedy; Bibliography of Social Science Periodicals and Monographs Published in Selected Difficult Languages: \$2,407

Frederick A. Leedy; Preparation and Publication of a Bibliographic Survey of Social Science Literature Published in Communist Bloc and Other Difficult Languages; 1 year; \$52,000

U.S. DEPARTMENT OF COMMERCE, OFFICE OF TECHNICAL SERVICES, Washington, D.C.; John C. Green; Support of The Translation Center in Delft; \$9,500

John C. Green; Operational Phase of the P.L. 480 Translation Program; 1 year; \$33,625

U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU, Washington, D.C.; F. W. Reichelderfer; Editorial Services for AGU's Project of Translating Soviet Hydrologic Literature; 1 year; \$5,100

U.S. LIBRARY OF CONGRESS, Washington, D.C.; Henry J. Dubester; User and Value Study of the Monthly Index of Russian Accessions; 6 months; \$21,560

Robert H. Land; Preparation and Publi-

cation of a Guide to International Information Facilities in Science, Technology, Medicine, and Agriculture; 1 year; \$16,153

Robert H. Land; Publication of Part I of A Monthly World List of Future International Meetings; 1 year; \$18,500

John Sherrod; Preparation and Publication of an Analytical Survey and Bibliography of Directories in the Sciences Throughout the World; 1 year; \$29,189

Rudolph Smits; Publication of the Monthly Index of Russian Accessions; 1 year; \$66,000

Rudolph Smits; Publication of the Monthly Index of Russian Accessions; 1 year;

UNIVERSITY OF CHICAGO, Chicago III.; Bert F. Hoselitz; Study of Pertinent Literature on Japanese and Chinese Economic History During the Last 250 Years; 1 year; \$9,982

University of Chicago Press, Chicago, III.; PAN AMERICAN UNION, Washington, D.C.; Anders Richter; Translation of the M. G. Jesse D. Perkinson, Jr.; Comprehensive Levin and L. P. Potapov Book, Narody-Study of the Statue of the Publication of Siberi; 1 year; \$9,300 UNIVERSITY OF HOUSTON, Houston, Tex.; Royal E. Collins; Evaluation and Compilation of a Bibliography of Oriental Literature on Filtration and Fluid Flow Through Porous Materials; 6 months; \$7,400

UNIVERSITY OF WISCONSIN, Madison; G. P. Woollard; Translation Program of Polar and Geophysical Literature and Publication of the Soviet Antarctic Information Bulletin in English; 1 year; \$54,281

#### GENERAL

ASSOCIATION OF RESEARCH LIBRARIES, Princeton, N.J.; William S. Dix; Partial Support for the Establishment of a Full-Time Secretariat: 2 years: \$58.350

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta; Dorothy M. Crosland; Programs for Training Personnel for Scientific and Technical Libraries; 8 months; \$28,348

UNIVERSITY OF NORTH CAROLINA, Chapel Hill; Jerrold Orne; Microfilming of Agricultural and Manufacturing Census Records of Fisteen Southern States for the Years 1850, 1860, 1870, and 1880; 2 years; \$15,677

WEST VIRGINIA UNIVERSITY, Morgantown; Michael M. Reynolds; Investigation of the Potential Use of the Resources of a Large Academic Library by the Smaller Academic Libraries and the Libraries of Industrial Organizations Within the Distinct Region; 1 year; \$5,060

## RESEARCH DATA AND INFORMATION

AMERICAN SOCIETY FOR METALS, Metals Park, Ohio; Robert D. Freeman; Partial Support of the Information Searching Service of the American Society for Metals; 3 months; \$35,900

CARNEGIE LIBRARY OF PITTSBURGH, Pittsburgh, Pa.; Ralph Munn; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$12,635

Ralph Munn; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; \$1,895

COLUMBIA UNIVERSITY, New York, N.Y.; Richard H. Logsdon; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$17,334

ENGINEERING SOCIETIES LIBRARY, New York, N.Y.; Stephen J. Kline; An Experimental Film Service on Flow Visualization Research Data; 5 years; \$9,700

JOHN CRERAR LIBRARY, Chicago, Ill; Herman H. Henkle; Establishment and Operation of a Regional Reference Center for Unclassified U. S. Government Scientific and Technical Reports; 1 year; \$11,671

LINDA HALL LIBRARY, Kansas City, Mo.; Joseph C. Shipman; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$6,400

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; William N. Locke; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$13,541

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; Charles H. Stauffer, St. Lawrence University; The Compilation and Systematization of Information on Chemical Kinetics; 2 years: \$4.895

years; \$4,895
Guy Waddington; The Office of Critical

Tables; 2 years; \$205,000

SOUTHERN METHODIST UNIVERSITY, Dallas, Tex.; Robert M. Trent; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$13,793

U.S. DEPARTMENT OF COMMERCE, OFFICE OF TECHNICAL SERVICES, Washington, D.C.; John C. Green; Key Word Index to U.S. Government Technical Reports; 1 year; \$64.600

U.S. LIBRARY OF CONGRESS, Washington, D.C.; L. Quincy Mumford; Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$1,000

U.S. SMITHSONIAN INSTITUTION, Washington, D.C.; Monroe E. Freeman; Partial Support for the Annual Operating Expenses of the Science Information Exchange; 1 year; \$125,000

UNIVERSITY OF CALIFORNIA, Berkeley; Donald Coney; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$11,115

Robert Vosper, Los Angeles; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$17.741

UNIVERSITY OF COLORADO, Boulder; Ralph E. Ellsworth; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$17,015

UNIVERSITY OF WASHINGTON, Seattle; Marion A. Milczewski; Establishment and Operation of a Regional Reference Center for Unclassified U.S. Government Scientific and Technical Reports; 1 year; \$12,877

## SCIENTIFIC PUBLICATIONS

ACTA METALLUBGICA, Schenectady, N.Y.; W. R. Hibbard; Translation and Publication of the 1962 Issues of the Russian Journal of Abstracts-Metallurgy, Part A and Part B; 1 year; \$69,000

AMERICAN ASTRONOMICAL SOCIETY, Princeton, N.J.; Lyman Spitzer, Jr.; Emergency Support for the Astronomical Journal; 2 years; \$18,500

AMERICAN CHEMICAL SOCIETY, Washington, D.C.; Richard H. Belknap; Support to Bring Annual Subject and Formula Indexes to Chemical Abstracts Up to Date; 1 year; \$190,000

AMERICAN GEOGRAPHICAL SOCIETY, New York, N.Y.; Charles B. Hitchcock; Publication of Soviet Geography: Accomplishments and Tasks: 3 years: \$9.075

Tasks; 3 years; \$9,075
A. W. Kuchler, University of Kansas;
Publication of A Colored Map of the Natural
Vegetation of the United States of America;
2 years; \$47,123

Wilfrid Webster; Preparation and Publication of Three Volumes of a Serial Atlas of the Marine Environment; 1 year; \$47,660

AMERICAN GEOPHYSICAL UNION, Washington, D.C.; Waldo E. Smith; Support for Publication of the Proceedings of the Matthew Fontaine Maury Memorial Symposium on Antarctic Research; 6 months; \$10,682
Waldo E. Smith and A. Nelson Sayre;

Waldo E. Smith and A. Nelson Sayre; Emergency Publication Support for the IG Bulletin; 1 year; \$37,500

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Hiden T. Cox; Experimental Publication of a Scientific Journal in Microform; 18 months; \$8,724

Hiden T. Cox; Participation of Ten Editors of Latin American Biological Journals in the 1962 Conference of Biological Editors; 8 months; \$14,651

Frank Fremont-Smith; Publication of Proceedings of the First Conference on Marine Biology; 1 year; \$18,272

John R. Olive; Biological Sciences Communication Project: 1 year: \$128.850

munication Project; 1 year; \$128,850 Charles W. Shilling; Survey of Scientific Research as Acknowledged in 100 Selected Biological Journals; 6 months; \$2,324

AMERICAN INSTITUTE OF THE HISTORY OF PHARMACY, Madison, Wis.; Sami K. Hamarneh, U.S. National Museum, and Glenn Sonnedecker; Support for Publication of the Monograph, A Pharmaceutical View of Abulcasts al-Zahrawi; 1 year; \$1,380

AMBRICAN INSTITUTE OF PHYSICS, New York, N.Y.; Elmer Hutchisson; Publication Support of a New Journal, Applied Optics; 3 years; \$44,625

Elmer Hutchisson; Applied Physics Letters: 6 months: \$23,635

AMERICAN MATHEMATICAL SOCIETY. Providence, R.I.; Gordon L. Walker; Publication of Mathematical Reviews; 6 months; \$266,000

Gordon L. Walker; Development of the Use of Photon for the Composition of Mathematical Reviews; 2 years; \$114,000

AMERICAN METEOROLOGICAL SOCIETY, Boston, Mass.; Malcolm Rigby; Partial Support of Expansion of Meteorological and Geoastrophysical Abstracts; 1 year; \$98,800

AMERICAN ROCKET SOCIETY, New York, N.Y.; Irwin Hersey; Partial Publication Support for the American Rocket Society Journal; 18 months; \$32,300

AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS, Philadelphia, Pa.; William J. Riemer, Florida State Museum; Preparation and Publication of a Catalogue of American Amphibians and Reptiles; 2 years; \$20,725

AMERICAN SOCIETY OF LIMNOLOGY AND OCEANOGRAPHY, INC., Ann Arbor, Mich.; George H. Lauff; Partial Publication Support for Limnology in North America; 1 year; \$7,000

Bernice P. Bishop Museum, Honolulu, Hawaii; Alexander Spoehr; Support of Publications Resulting from the Tenth Pacific Science Congress; 2 years; \$34,050

Alexander Spoehr; Five Monographs in Anthropology, Archaeology, Invertebrate Zoology, and Botany; 2 years; \$26,675

BIOLOGICAL ABSTRACTS, INC., Philadelphia, Pa.; G. Miles Conrad; Continued Expansion of Coverage of Biological Abstracts; 1 year; \$218,000

CHEMICAL ABSTRACTS SERVICE, Columbus, Ohio; G. Malcolm Dyson; Development and Initiation of a Mechanized File of Chemical Information; 1 year; \$156,500

CHICAGO NATURAL HISTORY MUSEUM, Ill.; Robert F. Inger; Partial Publication Support of The Fresh-water Fishes of North Borneo; 1 year; \$4,100

COMBUSTION INSTITUTE, Pittsburgh, Pa.; Bernard Lewis; Publication of the Ninth International Combustion Symposium Proceedings; 1 year; \$12,000

COBNELL UNIVERSITY, Ithaca, N.Y.; Martha Stahr Carpenter; Bibliography of Natural Radio Emission from Astronomical Sources; 1 year; \$23,000

DIVISION OF PLANT INDUSTRY, STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, Gainesville; Charles P. Kimball; Partial Support for the Preparation and Publication of Lepidoptera of Florida; 1 year; \$4,000

EARTHQUAKE ENGINEERING RESEARCH INSTI-TUTE, Pasadena, Calif.; George W. Housner; Publication of a Scientific Report on the Chilean Earthquakes of 1960; 1 year; \$7,020

Engineering Index, Inc., New York, N.Y.; Carolyn Flanagan; Partial Support of Expansion and Modernization of Engineering Index; 1 year; \$90,000

DUKE UNIVERSITY, Durham, N.C.; Harold E. Robinson; Publication of Generic Revisions of North American Brachytheciaceae; 1 year: \$900

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, Washington, D.C.; Milton O. Lee; Partial Support for the Office of Biological Handbooks; 2 years; \$40,000

FEDERATION INTERNATIONALE DE DOCUMEN-TATION, Paris, France; J. E. Humblet; Support of the Federation Internationale de Documentation; 2 years; \$5,900

FLORIDA STATE UNIVERSITY, Tallahassee; Ruth Schornherst Breen; An Illustrated Manual of the Mosses of Florida; 1 year; \$2.500

HARVARD UNIVERSITY, Cambridge, Mass.; I. Mackenzle Lamb; Publication of Indew Nominum Lichenum Annis 1934-1960 Vulgatorum; 1 year; \$15.500

gatorum; 1 year; \$15,500

Thomas J. Wilson; Partial Support of Final Preparation and Republication of Collected Experimental Papers by Percy W. Bridgman; 1 year; \$34,810

HUMAN RELATIONS AREA FILES, INC., New Haven, Conn.; Clellan S. Ford; Preparation and Publication of a Comprehensive Ethnographic Bibliography of South America; 18 months; \$16,800

INDIANA UNIVERSITY FOUNDATION, Bloomington; Frank J. Welcher; Preparation of Two Monographs on the Use of Organic Analytical Reagents; 3 years; \$4,000

INSTITUTE OF THE AEROSPACE SCIENCES, New York, N.Y.; Robert R. Dexter; Reduction of Backlog and Expansion of Coverage of the Journal of the Aerospace Sciences; 2 years; \$85,600

S. Paul Johnston; Continued Support of International Aerospace Abstracts; 1 year; \$50,600

S. Paul Johnston; Support of the Preparation and Publication of the 1962 Annual Index of the International Aerospace Abstracts; 1 year; \$39,000

INSTITUTE OF MALACOLOGY, Ann Arbor, Mich.; John B. Burch; Establishment of a New International Journal Malacologia; 3 years; \$11,037

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS, Paris, France; G. A. Boutry; Con-SCIENTIFIC tinued Partial Support of the International Abstracting Board; 1 year; \$7,500

INTERNATIONAL UNION OF PHYSIOLOGICAL SCIENCES, Rochester, N.Y.: Wallace O. Fenn, University of Rochester; Partial Support for Publications of the XII International Congress of Physiological Sciences; 1 year; \$12,880

IOWA STATE UNIVERSITY PRESS, Ames; Paul L. Errington; Partial Support for Publication of Muskrat Populations; year; \$6,127

NATIONAL ACADEMY OF SCIENCES, NATIONAL RESEARCH COUNCIL, Washington, D.C. : Hugh Odishaw; Emergency Publication Support for the IGY Bulletin; 1 year; \$36,-

Robert C. Stephenson; Continued Support for the Publication of GeoScience Abstracts; 2 years; \$57,000

NATIONAL FEDERATION OF SCIENCE STRACTING & INDEXING SERVICES, Washington, D.C.; Raymond A. Jensen; Partial Support of the I months; \$13,000 the Federation Secretariat;

Raymond A. Jensen; Study to Develop a National Plan and Program Defining the Current and Future Role of the Scientific Abstracting, Indexing, and Reviewing Services of the U.S.; 18 months; \$184,000

NEW YORK BOTANICAL GARDEN, New York; Otto Degener; Publication Support for Flora Hawaiiensis, Book VI; 1 year; \$6,000 E. H. Fulling; Publication of Classification

of Natural Communities by R. H. Whittaker; 1 year; \$1,700

Rudolf M. Schuster, University of Massachusetts; Publication Support for a Monograph, The Hepaticae and Anthocerotae of Bastern North America; 2 years; \$13,936

OPERATIONS RESEARCH SOCIETY OF AMERICA, Ann Arbor, Mich.; Herbert P. Galliher; Partial Support for Establishing International Abstracts in Operations Research; 2 years; \$24,000

PALEONTOLOGICAL SOCIETY, Ithaca, N.Y.; Claude Albritton; Partial Publication Support for the Journal of Paleontology; 4 years; \$4,795

PENNSYLVANIA STATE UNIVERSITY, University Park; William Spackman; Continued Support for the Compilation and Publication of Catalog of Fossil Spores and Pollen; 2 years; \$33,500

PRINCETON UNIVERSITY, Princeton, N.J.; John W. Tukey; Experimentation with a Citation Index for Statistical Methodology; 2 years; \$30,000

SCOTT POLAR RESEARCH INSTITUTE, Cambridge, England; Hilda Richardson; Partial Support of the Journal of Glaciology; 1 year; \$7.000

SOUTHERN STATE COLLEGE, Magnolia, Ark.; George E. Fay; Partial Publication Support | shall Clagett; Partial Support of Publication

of A Bibliography of Fossil Man, Parts I and II; 1 year; \$1,000

SOUTHWESTERN ASSOCIATION OF NATURAL-ISTS, Durant, Okla; Donald W. Tinkle; The Southwestern Naturalist; 3 years; \$3,725

TENTH NATIONAL CLAY CONFERENCE, Austin, Texas; Earl Ingerson; Partial Support of Cumulative Index to Proceedings of the Clay Minerals Conference; 1 year; \$750

RESEARCH FOUNDATION. Donovan S. Correll; Publication Support for the Monograph The Potato and Its Wild Relatives; 1 year; \$19,115

U.S. LIBRARY OF CONGRESS, Washington, D.C.; L. Quincy Mumford; Compilation of a Bibliography of Foreign Abstracting and Indexing Services; 3 months; \$3,360

University of California, Berkeley; John N. Belkin, Los Angeles; Mosquitoes of the South Pacific; 6 months; \$7,354

University of California Press, Berkeley; Ernest Callenbach and August Fruge; Par tial Publication Support of Ludwig Boltzmann's Lectures on Gas Theory; 1 year; \$3,508

University of Colorado, Boulder; Robert E. Gregg; Publication Support for the Monograph, Ants of Colorado, With Reference to Their Ecology, Taxonomy, and Geographic Distribution; 1 year; \$8,500

UNIVERSITY OF MIAMI, Coral Gables, Fla.; F. G. Walton Smith and Donald P. de Sylva, Miami; Support of the Publication of The Systematics and Life History of the Great Barracuda, Sphyraena Barracuda (Walbaum); 6 months; \$3,600

University of Minnesota, Minneapolis; W. J. Luyten; Publication Support for General Catalogue of the Bruce Proper Motion Survey; 1 year; \$12,175

University of North Carolina, Chapel Hill; Theodore B. Mitchell, Raleigh; Publication of Bees of the Eastern United States, Part 2; 1 year; \$6,000

University of Pennsylvania, Philadelphia; Frank B. Wood; Support for the Compilation and Publication of a Fourth Edition of A Finding List for Observers of Eclipsing Variables; 1 year; \$9,400

University of Pittsburgh, Pa.; Adolf Grunbaum; Publication Support for a Volume of Major Papers on Key Issues in the Philosophy of Science; 1 year; \$6,000

UNIVERSITY OF RHODE ISLAND, Kingston: Richard D. Wood; Publication of the Monograph A Manual and Revision of Characeae; 2 years; \$12,169

University of Tennessee, Knoxville; L. R. Hesler and Alexander H. Smith, University of Michigan; Partial Support of Publication of a Monograph North American Species of Hygrophorus; 1 year; \$8,680

UNIVERSITY OF TEXAS, Austin; G. de Vau-couleurs; Reference Catalogue of Bright Galaxies; 1 year; \$1,840

UNIVERSITY OF TOLEDO, Ohio; Wilhelm Eitel: Completion of the Manuscript for a New Edition of The Physical Chemistry of the Silicates; 1 year; \$6,100

University of Wisconsin, Madison; Mar-

of Archimedes in the Middle Ages, Volume I, The Arabo-Latin Tradition; 1 year; \$5,000 WAYNE STATE UNIVERSITY, Detroit, Mich.; S. K. Gangwere; Partial Support of Publication of Monograph Food Selection in Orthoptera; 1 year; \$800

WESLEYAN UNIVERSITY, Middletown, Conn.; Thornton Page; Publication of the Proceedings of the Conference on Instability of Systems of Galaxies; 6 months; \$6,000

## **CONFERENCES**

AGRICULTURAL & MECHANICAL COLLEGE OF TEXAS, College Station; Richard E. Wainerdl; Modern Trends in Activation Analysis; 1 year; \$2,300

AMERICAN ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE, Washington, D.C.; Graham DuShane; The Problems of Transliteration from the Cyrillic to the Latin Alphabet; 2 months; \$2,400

AMERICAN AUTOMATIC CONTROL COUNCIL, Whippany, N.J.; Harold Chestnut; Workshop on Automatic Control Research; 6 months; \$5,120

AMERICAN CHEMICAL SOCIETY, Washington, D.C.; Arthur E. Heming; Active Sites of Enzymes and Molecular Biology of Collagen; 1 year; \$2,500

AMERICAN FOUNDATION FOR THE BLIND, INC., New York, N.Y.; M. Robert Barnett; International Congress on Technology and Blindness; 1 year; \$20,000

AMBRICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D.C.; Frank Fremont-Smith; Second Conference on Marine Biology; 1 year; \$15,000

John R. Olive; 8th International Congress for Microbiology; 1 year; \$9,600

AMBRICAN MATHEMATICAL SOCIETY, Providence, R.I.; Gordon L. Walker; Symposium on High-Speed Computing and Mathematical Research; 18 months; \$8,000

AMERICAN PSYCHOLOGICAL ASSOCIATION, Washington, D.C.; John G. Darley; Support of the XVII International Congress of Psychology; 2 years; \$36,000

AMERICAN ROCKET SOCIETY, INC., New York, N.Y.; James J. Harford; Support of the XIIth International Astronautical Congress; 1 year; \$5,000

AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE, Gainesville, Fla.; Quentin B. Zielinski, Oregon State University; Fruit Breeding Symposium; 1 year; \$1,200

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, N.Y.; Eric F. Lype; Second Symposium on Thermophysical Properties; 1 year; \$9,500

A. C. Mueller; International Heat Transfer Conference; 1 year; \$15,000

AMERICAN SOCIETY OF ZOOLOGISTS, Urbana, Ill.; C. Ladd Prosser; Six Annual Regional Conferences in Comparative Endocrinology; 1 year; \$6,900

AMERICAN UNIVERSITY, Washington, D.C.; Lawrence Krader; Conference on International Information Services in the Social Sciences; 6 months; \$2,571

BROWN UNIVERSITY, Providence, R.I.; John Ross; International Conference on Irreversible Thermodynamics; 1 year; \$7,100

CARNEGIE INSTITUTE OF WASHINGTON, Washington, D.C.; Merle A. Tuve; Working Conference in Peru on Equatorial Aeronomy; 1 year; \$12,500

CENTER FOR ADVANCED STUDY IN THE BE-HAVIORAL SCIENCES, Stanford, Calif.; Jerry Hirsch, University of Illinois; Research Conference on Behavior Genetics; 1 year; \$18,000

COLORADO STATE UNIVERSITY RESEARCH FOUNDATION, Fort Collins; Gestur Johnson; Biochemistry of Plant Phenolic Substances; 1 year; \$6,000

COMBUSTION INSTITUTE, Pittsburgh, Pa.; Bernard Lewis; Ninth International Combustion Symposium; 1 year; \$25,000

CORNELL UNIVERSITY, Ithaca, N.Y.; R. H. Wasserman; Transfer of Calcium and Strontium Across Biological Membranes (with emphasis on Gastrointestinal Absorption); 1 year \$4,000

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, Washington, D.C.; Milton O. Lee; Conference on the Manpower Requirements of Biomedical Research and Teaching; 1 year; \$9,300
Stanford Moore; Planning Committee

Stanford Moore; Planning Committee Meetings for the VIth International Congress of Biochemistry; 1 year; \$10,000

FOUNDATION FOR INSTRUMENTATION EDUCA-TION AND RESEARCH, New York, N.Y.; Lloyd E. Slater; Symposium on the Impact of Systems Engineering Education and Research; 1 year; \$5,700

GALESBURG STATE RESEARCH HOSPITAL, Galesburg, Ill.; Harold E. Himwich; Conference on Developing Brain and Biogenic Amines; 1 year; \$5,500

GORDON RESEARCH CONFERENCES, INC., Kingston, R.I.; W. George Parks, University of Rhode Island; Structure and Function of Multilayer Systems in Cells; 1 year; \$4,500

Cyrus Levinthal, Massachusetts Institute of Technology and Leon A. Heppel, National Institutes of Health; Conference on Nucleio Acids and Proteins; 4 months; \$3,500

HARVARD UNIVERSITY, Cambridge, Mass.; H. B. Whittington; Evolution and Phylogeny of Crustacea; 1 year; \$4,400

HISTOCHEMICAL SOCIETY, Chicago, Ill.; William L. Doyle; Histochemistry and Extra-Cellular Substances; 1 year; \$800

INDIANA UNIVERSITY FOUNDATION, Bloomington; Thomas A. Schook; Meeting of the Committee of the Dissemination of Linguistic Literature; 1 year; \$2,300

INSTITUTE OF RADIO ENGINEERS, New York, N.Y.; George Birnbaum; International Conference on Precision Electromagnetic Measurements; 1 year; \$7,425

Long Island Biological Association, Cold Spring Harbor, N.Y.; Arthur Chovnick; Cold Spring Harbor Symposium on Quantitative Biology; 1 year; \$7,000

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge; Thomas T. Sandel; Research Conference in Computer Techniques for Biological Scientists; 1 year; \$16,000

METALLURGICAL SOCIETY OF AIME, New York, N.Y.; J. Stuart Smart, Jr.; Symposium on High Purity Iron and Its Dilute Solid Solutions; 1 year; \$650

J. Stuart Smart, Jr.; Symposium on Effect of Surface and Environment on Strength; 1 year; \$4,040

J. S. Smart, Jr.; Research Symposia of AIME Annual Meeting; 6 months; \$4,400 MINERALOGICAL SOCIETY OF AMERICA, University Park, Pa.; Elburt F. Osborn; Support of International Mineralogical Association Meeting; 1 year; \$25,400

MISSOURI BOTANICAL GARDEN, St. Louis; Fritz W. Went: Symposium on Quantitative Systematics; 1 year; \$1,900

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D.C.; John S. Coleman; Conference on Advances in Nuclear Geophysics; 1 year; \$12,000

Robert M. Dillon; First American Conference on Frozen Ground; 1 year; \$5,000

Linn Hoover; Tenth Annual Conference on Clays and Clay Minerals; 1 year; \$4,000 Linn Hoover; Conference on Recovery of

Pleistocene Fossils; 1 year; \$5,000 Hugh Odishaw; Third International Space Science Symposium and COSPAR Plenary Meeting; 1 year; \$26,000

Andre C. Simonpietri; Ad Hoc Meeting on Mineral Industry Education; 6 months; \$4,625

H. Burr Steinbach; Symposium on Plant Pathogens in Soil; 1 year; \$13,400

H. Burr Steinbach; Symposium on Plant Pathogens in Soil; 1 year; \$13,300 M. H. Trytten; 12th Meeting of Nobel

Laureates at Lindau; 3 months; \$2,650
J. W. Williams; University of Wisconsin; Sedimentation Analysis; 1 year; \$12,000

NEW MEXICO STATE UNIVERSITY, University Park; Elbert A. Walker; Conference on Abelian Groups; 6 months; \$9,000

NEW YORK UNIVERSITY, New York; John M. Converse and Blair O. Rogers; Support of the Fifth Tissue Transplantation Conference; 1 year; \$7,350

OHIO STATE UNIVERSITY, Columbus; Richard A. Tybout; Conference on Factors in Technological Research and Development; 1 year; \$2,000

OREGON STATE UNIVERSITY, Corvallis; Roy A. Young; Wilt Disease Conference; 1 year; \$3,200

PALEONTOLOGICAL SOCIETY, New York, N.Y.; Norman D. Newell; Symposium on the Principles of Paleoecology; 1 year; \$2,420

PAN AMERICAN Union, Washington, D.C.; Anthony Leeds; Seminar in Social Structure of Latin America; 6 months; \$10,100

PATENT OFFICE SOCIETY, Washington, D.C.; Harold Pfeffer; International Patent Office Workshop on Information Retrieval; 8 months; \$15,000

PENNSYLVANIA STATE UNIVERSITY, University Park; Rustum Roy; Conference on Crystal Synthesis and Structure in Solid State Re-

search; 1 year; \$1,700 J. M. Warren; The Prefrontal Cortem and Behavior; 1 year; \$6,400

PROTEIN FOUNDATION, INC., Jamaica Plain. Mass.; Robert B. Pennell; Annual Scientific Meetings of Protein Foundation; 1 year; \$500

PURDUE UNIVERSITY, Lafayette, Ind.; R. L. Stucky; Inter-University Seminar Series in Quantitative Economics; 8 years; \$34,700

RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany; Martynas Ycas, Syracuse; Conference on Biological Coding by Macromolecules; 1 year; \$6.800

RETINA FOUNDATION, Boston, Mass.; Gergely; Conference on Biochemistry Muscle Contraction; 1 year; \$20,000

RUTOBES, THE STATE UNIVERSITY, New Brunswick, N.J.; Vernon Bryson, Henry J. Vogel, and J. Oliver Lampen; Symposium on Informational Macromolecules; \$14,300

James W. Green; Conference on The Applications of Fundamental Biology to the Needs of Man: 1 year; \$900

STANFORD UNIVERSITY, Stanford, Calif.; Howard H. Pattee; Third International Sumposium on X-ray Optics and X-ray Microanalysis; 1 year; \$5,895

UNIVERSITY COLLEGE OF THE WEST INDIES, Andrew, Jamaica, British West Indies: John W. Purseglove: Neotropical Botany Conference; 1 year; \$9,600

UNIVERSITY OF BUFFALO, Buffalo, N.Y.; James F. Danielli; Conference on Amplification Techniques in Cell Biology; 1 year: \$3,700

University of California, Berkeley; Mary A. B. Brazier, Los Angeles; Research Conference in Computer Techniques for Biological Scientists; 1 year; \$17,600

Robert Hayes and Robert Vosper; Information Systems Workshop: The Designer's Responsibility and His Methodology; 1 year; \$21,000

E. P. Popov; World Conference on Shell

Structures; 1 year; \$4,800 H. W. Magoun, Los Angeles; Second Conference on Brain and Behavior: The Internal Environment and Alimentary Behavior; 1 year; \$28,400

H. W. Magoun and C. D. O'Malley, Los Angeles; Symposium on Neurophysiology; 1 year; \$3,500

UNIVERSITY OF COLORADO, Boulder; R. Grant Athay; Symposium on Magnetic Fields in the Solar System; 6 months; \$420

UNIVERSITY OF CONNECTICUT, Storrs; Robert C. Cleverdon; Conference on Pleuropneumonia-like Organisms; 1 year; \$5,000

Heinz Herrmann ; Perspectives in Developmental Genetics; 1 year; \$3,850

UNIVERSITY OF COSTA RICA, San Jose; John L. De Abate; Second Latin American Congress of Microbiology; 1 year; \$2,500

UNIVERSITY OF KANSAS, Lawrence; Charles A. Leone; Conference on Taxonomic Bio-chemistry, Physiology and Serology; 18 chemistry, months; \$17,800

UNIVERSITY OF MAINE, Orono : Ralph E. Armington; International Symposium on Electric Contact Theory; 1 year; \$4,400

UNIVERSITY OF MINNESOTA, Minneapolis; Eugene P. Pfleider; Fifth Rock Mechanics Symposium; 1 year; \$2,500

UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Arnold E. Ross; Mathematical Models in the Physical Sciences; 6 months; \$9,000 UNIVERSITY OF SOUTHERN CALIFORNIA, LOS Angeles ; Jay M. Savage ; Conference on Problems in Education and Research in Tropical Biology; 6 months; \$9,575

University of Texas Austin: Felix L. Haas, Houston; Conceptual Advances in Immunology and Oncology; 1 year; \$15,640

UNIVERSITY OF UPPSALA, Uppsala, Sweden; Per-Olov Lowdin; International Summer Institute in Quantum Chemistry; 1 year; \$9.000

UNIVERSITY OF VIRGINIA, Charlottesville; Morris E. Rose; Eastern Conference on Theoretical Physics; 1 year; \$2,500

WAYND STATE UNIVERSITY, Detroit, Mich.; Harry H. Josselson; Conference on Mechanical Translation Syntax Analysis and Programming; 4 days; \$5,500

WENNER-GREN FOUNDATION FOR ANTHROPO-LOGICAL RESEARCH, INC., New York, N.Y.; Dell H. Hymes, University of California; The Use of the Computer in Anthropology; 1 year: \$3,800

WILLIAM MARSH RICE UNIVERSITY, Houston, Tex.; Allen C. Enders; Symposium on the Subject of Delayed Implantation; 1 year; \$8,000

YALE UNIVERSITY, New Haven, Conn.; Richard C. Barker; Workshop on the Physics of Flux Reversal in Magnetic Materials; 1 year; \$3,000

Mead LeRoy Jensen; Biogeochemistry of Sulfur Isotopes; 1 year; \$10,000

## INTERNATIONAL TRAVEL

First Argentine Conference on Earthquake Engineering, San Juan, Argentina; April 16 to April 21, 1962 :

Glen V. Berg; University of Michigan; \$670

First European Malacological Congress, London, England; September 17 to September 22, 1962 :

R. Tucker Abbott: Academy of Natural Sciences of Philadelphia; \$507 John B. Burch; University of Michigan;

\$528 Melbourne R. Carriker; U.S. Bureau of Commercial Fisheries; \$482

Robert Robertson; Academy of Natural Sciences of Philadelphia; \$507

Dwight W. Taylor; U.S. Geological Survey; \$517 Henry van der Schalie; University of

First International Conference on Paramagnetic Resonance, Jerusalem, Israel; July 16 to July 20, 1962:

Michigan; \$528

George Benedek; Massachusetts Institute of Technology; \$875 Nicholaas Bloembergen; Harvard Uni-

versity; \$900 Joseph I. Budnick; Fordham University; \$900

Joseph Eisinger ; Bell Telephone Laboratories; \$900

Robert Englman; Massachusetts Insti-

tute of Technology; \$900 George Feher; University of California;

\$1,175 Sven R. Hartmann; University of Cali-

fornia; \$1,175 Walter Hauser; Northeastern Univer-

sity; \$900 Arnold Honig: Syracuse University;

\$925 Alvin Kiel; Johns Hopkins University; \$925

Daniel Kivelson; University of California; \$1,175 George F. Koster; Massachusetts Insti-

tute of Technology; \$900 Edgar Lipworth; Brandels University;

\$900 G. W. Ludwig: General Electric Re-

search Laboratory; \$900 Joaquin M. Luttinger; Columbia University; \$900

Marshall; Armour Research A.

Foundation; \$960 Raymond L. Orbach; Harvard Univer-

sity; \$900 Marshall S. Sparks; Stanford University; \$1,175

Harvey J. Stapleton; University of Illinois; \$1,025 John E. Wertz; University of Min-

nesota; \$1,000

First International Congress on Chemical Machinery, Engineering, and Automation, Brno, Czechoslovakia; September 2 to September 9, 1962:

Donald F. Othmer; Polytechnic Institute of Brooklyn; \$629 Joe Mauk Smith; University of Cali-

fornia; \$900

First Meeting, International Ship Struc-tural Congress, Glasgow, Scotland; Sep-tember 19 to September 21, 1961:

Edward V. Lewis; Stevens Institute of Technology; \$425

Second Annual West African Languages Congress, Dakar, Senegal; April 12 to April 17, 1962

William J. Samarin; Hartford Seminary Foundation; \$740

Hans Wolff: Michigan State University: \$775

Second Conference on Nonlinear Vibrations, Warsaw, Poland; September 18 to September 21, 1962 :

R. M. Rosenberg; University of California; \$982

Second European Congress of Microcircula-

tion, Pavia, Italy; September 1962: Stanley E. Charm; Massachusetts Institute of Technology; \$700

Second International Conference on Stress Analysis, Paris, France; April 10 to April

14, 1962 : M. M. Frocht: Illinois Institute of

Technology; \$596
Peter K. Stein; Arizona State University; \$807

Second International Congress of Radiation Research, Harrogate, Yorkshire, England; August 5 to August 11, 1962;

National Academy of Sciences, National Research Council, Washington, D.C.; \$15,000

Second International Symposium on Continuous Culture of Microorganisms, Prague,

Czechoslovakia; June 18 to June 23, 1962: Richard I. Mateles; Massachusetts Richard I. Mateles; Mass Institute of Technology; \$600 Erling J. Ordal; University of Wash-

ington; \$850

Second International Symposium on the Chemistry of Natural Products; Prague, Czechoslovakia; August 27 to September 2, 1962:

Roger Adams; University of Illinois; \$700

Ajay K. Bose; Stevens Institute of | Technology; \$400

Werner Herz: Florida State University; \$750

Richard K. Hill; Princeton University;

Maurice Shamma; Pennsylvania State

University; \$640

Milton D. Soffer; Smith College; \$625 D. M. S. Wheeler; University of Nebraska; \$750

Emil H. White; Johns Hopkins University: \$625

Second Latin American Congress of Microbiology, San Jose, Costa Rica; December 10 to December 17, 1961:

Eugene H. Cota-Robles; University of

California; \$341 Philipp Gerhardt; University of Michigan; \$449

Franklin Sogandares-Bernal; Tulane

University; \$270 Kenneth F. Wertman; University of Arizona; \$512

2d Latin American Congress of Zoology, Sao Paulo, Brazil; July 1962:

James A. Peters; San Fernando Valley State College; \$700

Second Symposium on Antibiotics in Agriculture. Leicestershire, England; April 2 to April 6, 1962:

Robert N. Goodman; University of Missouri: \$625

Second Symposium on Photoelectronic Image Devices as Aids to Scientific Observation, London, England; September 5 to September 8, 1961:

W. A. Hiltner; University of Chicago; \$688

Merle F. Walker; University of California: \$850

Caribbean Geological Conference, Kingston, Jamaica; April 2 to April 11, 1962:

James I. Jones; University of Miami;

Third Congress, European Federation of Chemical Engineering, London, England; June 20 to June 26, 1962:

Harry G. Drickamer; University of

Illinois; \$600

Irving Fatt; University of California; \$717

Andrew W. Jenike: University of Utah; \$707

Rustum Roy; Pennsylvania State University; \$524

Third Congress, International Council of the Aeronautical Sciences, Stockholm, Sweden; August 27 to September 1, 1962:
E. V. Laitone; University of California; \$860

Third International Symposium on Rarefled Gas Dynamics, Paris, France; June 26 to June 30, 1962:

Raymond L. Chuan; University of Southern California; \$816 Donald R. Willis; Princeton Univer-

sity; \$526

Henry Wise; Stanford Research Institute; \$806

Third Meeting of the Standing Committee on Hydrogeologic Maps, Paris, France; March 3 to March 12, 1962:

Philip E. LaMoreaux; Alabama State Oll and Gas Board; \$700

Fourth International Congress on Acoustics, Copenhagen, Denmark; August 21 to August 28, 1962:

John F. Corso; Pennsylvania State University: \$600

Ladislav Dolansky; Northeastern University; \$575

Herbert A. Erf; Acoustical Society of

America; \$600 Karl F. Herzfeld; Catholic University; \$600

Egon A. Hiedemann; Michigan State University; \$600 William F. Hughes; Carnegie Institute

of Technology; \$650

Edgar A. Kraut; University of California; \$825 Robert B. Lindsay; Brown University;

\$600 Douglas F. Muster; University of Hous-

ton; \$765 Wayne Rudmose; Southern Methodist

University; \$480 Thomas D. Sachs; University of Ver-

mont; \$600 Robert A. Walkling; Harvard University; \$550

Fourth International Congress on Acoustics. Copenhagen, Denmark; Speech Communication Seminar, Stockholm, Sweden; and Information Theory Symposium, Brussels, Belgium; August and September 1962:

Edward C. Carterette; University of California; \$980

Symposium International on Gas Chromatography, Hamburg, Germany; June 13 to June 16, 1962:

Warren W. Brandt; Kansas State University; \$700

Richard S. Juvet, Jr.; University of Illinois: \$650

4th International Symposium on Nutrient Absorption by Plants, Pisa and Florence, Italy; April 9 to April 14, 1962:

Tukey; Harold Bradford Michigan State University; \$1,100

Fifth European Symposium on Fruit Tree Viruses, Bologna, Italy; June 1 to June 8, 1962:

Harvey K. Wagnon; State of California Dept. of Agriculture: \$900

Fifth International Conference on Ionization Phenomena in Gases, Munich, Germany; August 28 to September 1, 1961:

Zohrab A. Kaprielian; University of Southern California; \$825

Martin Lessen; University of Rochester: \$610

Charles H. Papas; California Institute of Technology; \$825

Fifth Pan American Congress of Endocrinology, Lima, Peru; October 15 to October 21, 1961:

Endocrine Society; \$6,500

Sixth Congress, International Association on Quaternary Research, Warsaw, Poland; September 2 to September 7, 1961:

Robert Julius Drake; University of British Columbia; \$900

Estella B. Leopold; U.S. Geological Survey; \$795

Louis Lamy Ray; U.S. Department of the Interior; \$650

Sixth Congress of the International Commission for Optics, Munich, Germany; August 19 to August 26, 1962:

Stanley S. Ballard; University of Fiorida : \$640 H. Richard Blackwell; Ohio State University; \$640

Glenn A. Fry; Ohio State University; \$640 M. Parker Givens: University of Roches-

ter; \$610

Jay Stuart Haft; Seton Hall College of Medicine; \$570

Leo M. Hurvich; New York University; \$570

Gerald H. Jacobs; Indiana University; \$650

Kenneth N. Ogle; Mayo Clinic and Mayo Foundation; \$700

David Z. Robinson; Office of Science Advisor; \$600 Thorne Shipley; Bascom Palmer Eye

Institute; \$720 George W. Stroke; Massachusetts Institute of Technology; \$560

Mary E. Warga; Optical Society of

America: \$600 Sixth International Congress in Audiology, Leyden. The Netherlands: September 5 to

September 8, 1962: Leo G. Doerfler; University of Pittsburgh; \$580

VIth International Congress of Prehistoric and Protohistoric Sciences. Rome. Italy: August 29 to September 3, 1962:

James B. Griffin; University of Michigan; \$690

Kenneth Honea; University of Texas; \$800

Hallam L. Movius, Jr.: Harvard University; \$200

Wilhelm G. Solheim, II; University of Hawaii; \$1,125

Fred Wendorf: Museum of New Mexico: \$115

H. M. Wormington; Denver Museum of Natural History; \$810

Sixth International Congress on High Speed Photography, Scheveningen, Netherlands; September 17 to September 22, 1962:

Weston B. Farrand; Stanford Research Institute; \$830

Sixth Study Week on Traffic Engineering, Salzburg, Austria; September 10 to September 16, 1962:

Donald S. Berry: Northwestern University; \$714

7th International Conference on Coordination Chemistry, Stockholm, Sweden; June 25 to June 29, 1962:

John C. Bailar, Jr.; University of Illinois; \$625

Carl H. Brubaker, Jr.; Michigan State University; \$650

Daryle H. Busch; Ohio State University; \$675

Richard L. Carlin; Brown University; \$620

Bodie E. Douglas; University of Pittsburgh; \$660 Quintus Fernando; University of Ari-

zona; \$865 Gilbert Gordon; University of Maryland; \$645

Harry B. Gray; Columbia University; \$615

Randall E. Hamm; University of Utah; \$850

Lindsay Helmholz: Washington University; \$725 J. L. Hoard; Cornell University; \$650

David N. Hume; Massachusetts Insti-

tute of Technology; \$600
Milton Kerker; Clarkson College of
Technology; \$675

Stanley Kirschner; Wayne State University; \$650 Arthur E. Martell; Illinois Institute of

Technology; \$700

Theron S. Piper; University of Illinois; \$700 Joel Selbin : Louisiana State University :

\$775 Robert Carl Stoufer; University of

Florida: \$615 Benson Ross Sundheim; New York University; \$615

R. Stuart Tobias; University of Minnesota; \$725

Wayne K. Wilmarth; University of Southern California; \$615

Seventh International Conference on Cosmic Rays and the Earth Storm, Kyoto, Japan; September 4 to September 15, 1961:

Herbert S. Bridge; Massachusetts Institute of Technology; \$1,150 T. Neil Davis; Geophysical Institute;

\$750

T. Gold; Cornell University; \$1,200 Paul J. Kellogg; University of Minnesota: \$850

Mukul R. Kundu; University of Michigan; \$1,500

Robert S. Leonard; Geophysical Institute; \$750

7th Plenary Session of Comite Europeen Du Beton, Luxembourg, Luxembourg; April 27 to May 1, 1962:
Phil M. Ferguson; University of Texas;

\$540

8th International Ceramic Congress, Copenhagen, Denmark; May 21 to May 26, 1962: Jesse D. Walton, Jr.; Georgia Institute of Technology; \$660

Eighth International Conference on Low Temperature Physics, London, England; September 16 to September 22, 1962:

Henry V. Bohm; Wayne State University; \$575

David H. Douglass, Jr.; Massachusetts Institue of Technology; \$605 John M. Goodkind; University of Cali-

fornia; \$830 Leo P. Kadanoff; University of Illinois; \$625

K. Luszczynski; Washington University; \$630

Bernd T. Matthias; University of California; \$830

Hans Meissner; Stevens Institute of Technology; \$510

Robert H. Romer; Amherst College; \$535

San Fu Tuan; Brown University; \$605 Harold Weinstock; Cornell University; \$490

Eighth International Meeting of the Institute of Management Sciences, Brussels, Belgium; August 23 to August 26, 1961:

Miles W. Martin, Jr.; Case Institute of Technology: \$652

Eighth Latin American Congress on Chemistry, Buenos Aires, Argentina; September 16 to September 22, 1962:

Ronald Breslow: Columbia University;

Malcolm Dole: Northwestern University, \$735

Ninth Congress, International Association for Hydraulic Research, Belgrade, Yugoglavia: September 3 to September 7, 1961: Chesley J. Posey; University of Iowa;

9th Plenary Meeting, International Organization for Standardization, Technical Committee 46 (Documentation), Paris, France; June 25 to June 27, 1962:

Henry J. Dubester; Library of Congress;

Robert E. Kingery; New York Public Library; \$943 Jerrold Orne; University of North Caro-

lina; \$1,067

Eleventh International Astrophysical Symposium, Liege, Belgium; July 9 to July 11, 1962:

Wendell C. DeMarcus; University of Kentucky: \$715

A. M. J. Gehrels; University of Arizona; \$825

Paul W. Hodge: University of California; \$830

Gerard P. Kuiper; University of Arizona; \$825

Barbara M. Middlehurst; University of Arizona; \$825

Morton S. Roberts ; Harvard University ; \$582

Gerhard F. Schilling; RAND Corporation; \$830

Alex G. Smith; University of Florida; \$750

Harlan J. Smith; Yale University; \$600 Rupert Wildt: Yale University: \$650

Eleventh International Conference on High Energy Physics, Geneva, Switzerland; July 4 to July 11, 1962:

Guiseppe Cocconi; Cornell University;

Tsung-Dao Lee; Institute for Advanced Study; \$575

Julian S. Schwinger; Harvard University; \$575

John S. Toll; University of Maryland; \$600

Chen Ning Yang; Institute for Advanced Study: \$575

12th Congress of Logopedics and Phoniatrics, Padua, Italy; August 29 to September 4, 1962:

> John W. Black: Ohio State University: \$730

> Jon Eisenson; Queens College; \$910 Harry Hollien; University of Wichita; \$790

> Wendell Johnson; University of Iowa; \$780

M. D. Steer; Purdue University; \$700 Ronald W. Wendahl; Baylor University College of Medicine; \$750

12th World's Poultry Congress, Sydney, Australia; August 10 to August 18, 1962:

R. A. Bankowski; University of California; \$1,000

Hardy M. Edwards, Jr.; University of Georgia; \$1,300

A. M. Guhl; Kansas State University; \$1,000

Morley R. Kare; University of North

Carolina; \$1,300 Emilio C. Mora; Auburn University; \$1,300

Thirteenth International Committee of Electrochemical Thermodynamics and Kinetics, Rome, Italy; September 24 to September 29, 1962:

John O'M. Bockris; University of Pennsylvania; \$641

Anthony Toprac; University of Ă. Texas; \$680

XVth Annual Congress of the International Science Film Assoc., Rabat, Morocco; September 16 to September 27, 1961:

Robert E. Green; National Academy of Sciences National Research Council:

\$1,073 Roman Vishniac: Yeshiva University;

\$1,039 Willard Webb; Library of Congress; \$1,073

15th Assembly, International Institute of Welding, Oslo, Norway; June 25 to June 30,

1962: Robert D. Stout; Lehigh University; \$526

XVI International Horticultural Congress, Brussels, Belgium; August 31 to September 8, 1962:

American Society for Horticultural Science; Gainesville, Fla.; \$15,000

17th Symposium of the Society for Experimental Biology, Edinburgh, Scotland; September 3 to September 8, 1962:

John Tyler Bonner; Princeton University; \$550

James H. Leech; University of Texas; \$700

XXII International Congress of Physiological Sciences, Leiden, The Netherlands; September 11 to September 17, 1962:

National Academy of Sciences-National Research Council; \$25,200

Twenty-Fifth Anniversary Symposium, British Glaciological Society, Cambridge, England: January 5 to January 7, 1962:

Charles R. Bentley; University of Wisconsin; \$480

Edward R. LaChapelle; University of Washington; \$660

Twenty-Seventh Conference of the International Federation for Documentation, London, England; September 12 to September 15, 1961:

Alexander M. Moore; Parke, Davis and Co.; \$525

33rd Session, International Statistical Institute, Paris, France; August 28 to September 7, 1961:

Herbert Robbins; Columbia University;

49th Annual Meeting of International Council for Exploration of the Sea, Copenhagen,

Denmark: October 2 to October 11, 1961: Dayton E. Carritt; Woods Hole Oceano-graphic Institute; \$419

50th Anniversary Meeting of Palaontologische Gesellschaft, Tubingen, Germany and 3rd International Meeting of Neurobiologists, Kiel, Germany; September 1962:

Tilly Edinger; Harvard University; \$620

1961 International Colloguy for Methodology of Sciences, Warsaw, Poland; September 18 to September 23, 1961

Roderick M. Chisholm; Brown Univer-

sity ; \$675 William K. Estes: Stanford University:

\$750 Patrick Suppes; Stanford University;

1962 International Semiconductor Conference. Exeter, England; July 16 to July 20, 1962:

Elias Burstein; University of Pennsylvania; \$525

Arthur G. Milnes; Carnegie Institute of Technology; \$200

James C. Phillips; University of Chicago; \$600

Annual Meeting of the International Federation of Library Associations, Edinburgh, Scotland: September 3 to September 7, 1961; and Twenty-Seventh Conference of the International Federation for Documentation, London, England; September 8 to September 14, 1961:

Eugene B. Jackson; General Motors Corporation; \$528

British Mathematics Colloquium, Southampton, England; April 10 to April 14, 1962: Raoul Bott; Harvard University; \$500

Caribbean Division of the American Phytopathological Society, Guatemala; June 17 to June 23, 1962:

Frederick L. Wellman; University of Puerto Rico: \$350

Chemical Society, Anniversary Meetings, Sheffield, England; April 3 to April 5, 1962: Henry Eyring; University of Utah; \$800

Classification and Human Evolution, Burg-Wartenstein, Austria; July 8 to July 21, 1962:

Wenner-Gren Foundation for Anthropological Research; \$4,000

Collegium Internationale Neuro-Psycho Pharmacologicum, Munich, Germany; International Meeting on Phenothiazine Metabolism, Paris, France; Conference on Development and Structure of the Brain, Amsterdam, The Netherlands; International Congress of Physiological Sciences, Leyden, The Netherlands; and International Brain Research Organization Meeting, Paris, France; September 1962:

Heinrich Waelsch; Columbia University; \$720

Colloquium of Sint Jans Hospitaal Brugge Belgium, Protides of Biological Fluids, Brugge, Belgium; May 3 to May 6, 1962:

Elliot S. Vesell; Rockefeller Institute; \$530

Colloquium of the Commission on the Arid Zone, Athens, Greece; September 1962: Andrew W. Wilson; University of Ari-

zona; \$1,000

Colloquium on Foundations of Mathematics, Mathematical Machines, and Their Applications, Budapest, Hungary; September 11 to September 15, 1962:

Robert B. Lees; University of Illinois; \$900

Vibrations Colloquium Colloquium on Non-Linear Vibrations (IUTAM), Kiev, U.S.S.R.; September 12 to September 26, 1961:

Iain Finnie: University of California; \$1,025

Robert E. Roberson; \$1,025 R. M. Rosenberg; University of California: \$1.050

Colloquium on Soil Fauna, Soil Micro-organisms and Their Relationships, Oosterbeek, Netherlands; September 10 to September 16, 1962:

Kurt K. Bohnsack; San Diego State College; \$800 Reinhold Mankau; University of Cali-

fornia; \$863

Colloquium on Topology, Aarhus, Denmark; August 1 to August 10, 1962:

Donald W. Kahn; Columbia University; \$450

Components Committee of IFAC and Conference on Modern Methods of Calculation and Industrial Automation, Paris, France; May 25 to June 1, 1962:

J. Lowen Shearer; Massachusetts Institute of Technology; \$517

Conference of Human Genetics, Rome, Italy; September 7 to September 12, 1961:

Jay L. Lush; Iowa State University; \$1,200

Conference on Differential Equations and Their Applications, Prague, Czechoslovakia;

September 5 to September 11, 1962: Jack K. Hale: Research Institute for Advanced Study; \$600

Conference on Environmental Control of Plant Growth, Canberra, Australia; August 25 to August 31, 1962:

James Bonner; California Institute of Technology; \$1,050

Joost A. Businger; University of Washington; \$1,000

Robert M. Hagan; University of Cali-

fornia; \$400 Karl C. Hamner; University of Cali-

fornia; \$1,050 Harry R. Highkin; San Fernando Val-

ley State College; \$1,050 J. Kramer: Duke University: Paul

\$1,400

Lang; California Institute of Anton Technology; \$1,050

J. Levitt; University of Missouri;

\$1,000 M. B. Russell; University of Illinois;

\$1,300 F. C. Steward: Cornell University;

\$1,400

Champ B. Tanner; University of Wisconsin; \$1,300

Conference on Linguistic Theory and Structural Grammar of German, Berlin, Germany; January 20 to January 26, 1962:

Robert B. Lees; University of Illinois; \$600

Conference on Nuclear Structure and Superconductivity, Neuchatel, Switzerland; July 12 to July 16, 1962: Hans Frauenfelder; University of Il-

linois; \$675

J. Robert Schrieffer; University of Illinois; \$805

Conference on Partial Differential Equations, Prague, Czechoslovakia; September 5 to September 11, 1962:

Louis Nirenberg; New York University; \$750

Conference on Repair from Genetic Radiafrom Gen. Differential Radio-Damage and tion sensitivity in Germ Cells, Leiden, lands; August 16 to August 19, 1962:

Helen Gay; Carnegie Institute of Washington; \$525

Conference on The Impact of Physical Metallurgy on Technology, Buenos Aires, Argentina; April 2 to April 7, 1962:
William Marsh Baldwin, Jr.; Case In-

stitute of Technology; \$690

Bruce Chalmers; Harvard University; \$640

John P. Howe; Cornell University; \$650

Robert Maddin; University of Pennsylvania; \$600

Cyril Stanley Smith; Massachusetts In-

stitute of Technology; \$640 Morris Tanenbaum; Bell Telephone Laboratories; \$620

Conference on the Ionosphere, London, England; July 2 to July 6, 1962:
Erwin R. Schmerling; Pennsylvania

State University; \$625

Derek A. Tidman; University of Maryland; \$646

Conference on the Present Status and Future Prospects of Television and Motion Pictures as Media for Medical Education, Milan, Italy; April 25 to April 27, 1962:

Council on Medical Television of the Institute for the Advancement of Medical Communication; \$4,382

Conference on the Theory of Elasticity and Plasticity, Warsaw, Poland; September 2 to September 13, 1962:

Edward Saibel; Rensselaer Polytechnic Institute; \$822

Conferences with Representatives of Japanese Scientific Societies, Tokyo and Hokkaido, Japan; July 1 to July 5, 1962:

John R. Olive; American Institute of

Biological Sciences; \$1,172

Crystal Plasticity and Radiation Damage, Gottingen, Germany; October 9 to October 13. 1961:

Doris Wilsdorf: University of Pennsylvania; \$600

Cultural Development of the Maya, Burg-Wartenstein, Austria; September 6 to September 13, 1962:

Wenner-Gren Foundation for Anthropological Research; \$3,500

Delivering Lectures on the Integration of Partial Differential Equations, Paris, France; August 28 to September 14, 1961: Joaquin B. Diaz; University of Maryland; \$575

Determining the Extent of Japanese Publications in Astronautics and Rocketry, Tokyo, Japan; March 12 to April 15, 1962:

Irwin Hersey; American Rocket Society; \$1,639

Economic Development of Agriculture in Soviet Bloc Countries, Budapest, Hungary; Warsaw, Poland and Moscow, Russia; July and August 1962:

Earl O. Heady; Iowa State University; \$1,900

European Symposium on Fresh Water from the Sea, Athens, Greece; May 31 to June 3, 1962:

Donald A. Cowan; University of Dallas; \$910

George A. Jeffrey; University of Pittsburgh; \$800

EUSEC Meeting on Engineering Education, London, England; June 25 to June 30, 1962: W. Leighton Collins; University of Illi-

nois; \$930 A. Hall; Yale University; Newman

\$820 Ralph A. Morgen; Stevens Institute of Technology; \$810

Glenn Murphy; Iowa State University; \$960

Executive Committee, International Institute of Refrigeration, Paris, France; November 20 to November 22, 1961:

Richard C. Jordan; University of Minnesota; \$525

Faraday Society Discussion on the Structure of Ionic Melts, Liverpool, England; September 5 to September 7, 1961:

Ole J. Kleppa; University of Chicago; \$565

Florence Symposium on the Renaissance and Modern Science, Florence, Italy; June 20 to June 25, 1962:

U.S. National Committee for the International Union for the History and Philosophy of Science; \$493

General Assembly of the Division of the Logic, Methodology, and the Philosophy of Science and the Colloquim on Non-Aristotelian Logics, Helsinki, Finland; August 1962:

U.S. National Committee for the International Union for History and Philosophy of Science; \$3,500

IAMAP Ad Hoc Committee on Interaction Sea and Atmosphere, Marseilles, France; September 3 to September 5, 1961:

Robert G. Fleagle; University of Washington; \$950

Conference on Photochemistry, Informal Brussels, Belgium; June 18 to June 22, 1962: Kyle D. Bayes; University of California; \$825

Information Theory Symposium, Brussels, Belgium; September 3 to September 7, 1962: Richard C. Atkinson; Stanford Uni-

versity; \$820 David J. Braverman; California Institute of Technology; \$806

George L. Gerstein; Massachusetts Institute of Technology; \$520

Inter-American Conference on Mathematical Education, Bogotá, Colombia; December 4 to December 9, 1961: Sanborn C. Brown; Massachusetts In-

stitute of Technology; \$500

Inter-American Cosmic Ray Symposium, La Paz, Bolivia; July 17 to July 27, 1962: Kenneth Greisen; Cornell University;

Serge A. Korff; New York University; \$600

John Linsley; Massachusetts Institute of Technology; \$650

Inter-American Seminar on Educational Travel (IAESTE), Bogotá, Colombia; January 21 to January 25, 1962:

Josef Wischeldt, Jr.; Engineers Joint Council; \$300

Intergovernmental Oceanographic Commission Conference, Paris, France; October 19 to October 27, 1961:

Robert L. Fisher; University of California; \$794

International Association of Scientific Hydrology, Athens, Greece; October 12 to October 21, 1961:

John W. Harshbarger; University of Arizona; \$1,050

International Colloquium on Information in Biology, Royaumont, France; Summer 1962: Peter Lengvel; New York University; \$1,000

International Colloquium on Insect Pathology and Microbial Control, Paris, France; October 16 to October 20, 1962:

Edward A. Steinhaus; University of California; \$1,000

International Colloquium on Mutilingualism in Africa, Brazzaville, Congo Republic; July 17 to July 21, 1962: Frederic G. Cassidy; University of Wis-

consin; \$1,025 David DeCamp; University of Texas;

\$1,105

International Committee on Coal Petrology, Liege, Belgium; September 4 to September 16, 1962

Robert M. Kosanke; Illinois State Geological Survey; \$750

William Spackman; Pennsylvania State University; \$650

International Conference, Le Reve et Les Societies Humaines, Paris, France; June 18 to June 23, 1962:

Dorothy W. Eggan; \$610

International Conference on Crystal Lattice Defects, Kyoto, Japan; September 7 to September 12, 1962:

W. J. Fredericks; Stanford Research Institute; \$710 John J. Gilman; Brown University;

\$1,000

Walter J. Moore; Indiana University; \$780

Erwin W. Mueller; Pennsylvania State University; \$1,100

Henry M. Otte; RIAS, Inc.; \$1,105 Allen B. Scott; Oregon State University; \$885

Roman Smoluchowski; Princeton Uni-

versity; \$1,025 Robb M. Thomson; University of Illi-nois; \$990

George D. Watkins; General Electric Research Laboratory; \$600

Sigmund Weissmann; Rutgers,

State University: \$1,125

George P. Williams, Jr.; Wake Forest College; \$550 Heinz G. F. Wilsdorf; Franklin Insti-

tute Laboratories ; \$1,125

International Conference on Direct Interactions and Nuclear Reaction Mechanisms, Padua, Italy; September 3 to September 8.

1962: Charles W. Drake, Jr.; Yale University; \$635

Richard M. Drisko; University of Pittsburgh; \$640

R. W. Fink; Marquette University; \$700 A. E. Glassgold; University of California: \$850

David Halliday; University of Pittsburgh; \$395

Maryland; \$650 Jerry B. Marion; University of Mary-

land; \$650 Louis A. Rayburn; University of Geor-

gla; \$705

Rogers C. Ritter; University of Virginia; \$670

William W. True; University of California ; \$850

Robert M. Williamson; Michigan State University, Oakland; \$685

International Conference on Gas Discharges and Electricity Supply Industry, Leather-head, England; May 7 to May 11, 1962: John B. Thomas; Princeton University;

\$486

International Conference on Heating, Ventilating and Air Conditioning, London, England: September 27 to October 4, 1961:
Tony C. Min; Auburn University; \$600

International Conference on Machine Translation of Languages and Applied Language Analysis, Teddington, England; September 5

to September 8, 1961: Seymour B. Chatman; University of California; \$1,135

International Conference on Machine Translation of Languages and Applied Language Analysis, Teddington, England; September 5 to September 8, 1961; and Visit Groups Engaged in Mechanical Translation Research in the Soviet Union, Moscow, Russia; September 9 to September 30, 1961:

Kenneth E. Harper; University of California; \$1,492

International Conference on Magnetism and Crystallography, Kyoto, Japan; September 25 to September 30, 1961:

Benjamin C. Frazer; Brookhaven National Laboratory; \$550 James A. Ibers; \$550

on Microwave International Conference Measurement Techniques, London, England;

September 6 to September 8, 1961: Charles Susskind; University of California; \$754

International Conference on Relativity and Gravitation, Warsaw, Poland; July 25 to

July 31, 1962:
Peter G. Bergmann; Syracuse University; \$710

S. Chandrasekhar; University of Chicago; \$765

Arthur B. Kamor; Syracuse University; \$710

International Conference on Scientific Information in the Field of Crystallography and Solid State Physics, Nishinomiya, Japan; October 3 to October 4, 1961:

Wilbur C. Bigelow; University of Mich-

igan; \$1,561 J. D. H. Donnay; Johns Hopkins University; \$1,525

International Congress of Electroencephalography, Rome, Italy; September 7 to September 16, 1961:

Gian Emilio Chatrian; Hosp.; \$800 Dominick P. Purpura ; Columbia Univer-

sity; \$800

International Congress of Electroencephalog- | International Ophthalmic Optical Congress, raphy, Rome, Italy; September 7 to September 10, 1961; and International Congress of Neurology, Rome, Italy; September 11 to September 15, 1961: Reginald G. Bickford; Mayo Founda-

tion; \$1,000

International Congress of Mathematicians, Stockholm, Sweden: August 15 to August 22, 1962:

Howard Franklin Fehr; Teachers College, Columbia University; \$626 Mariano Garcia; University of Puerto

Rico; \$750

Burton W. Jones: University of Colorado; \$701

John G. Kemeny; Dartmouth College; \$442

Kenneth O. May; Carleton College; \$725 Edwin E. Moise; Harvard University; \$604

Fazlollah M. Reza; Syracuse University; \$646

National Academy of Sciences-National Research Council; \$75,000

Patrick Suppes; Stanford University; \$835

Albert W. Tucker; Princeton University; \$624

International Congress of Neuropathology, Munich, Germany; September 4 to September 7, 1961; and International Congress of Electroencephalography, Rome, Italy; September 7 to September 13, 1961:

A. Earl Walker; Johns Hopkins University; \$800

International Council of Scientific Unions, Abstracting Board Meeting, Paris, France; July 11 to July 14, 1962:

Raymond A. Jensen; National Federation of Science Abstracting and Indexing Service: \$979

International Course for Geodetic Distance Measurements, Munich, West Germany; Sep-

tember 4 to September 12, 1961:
Milton O. Schmidt; University of Illinois; \$650

International Electrotechnical Commission, Baden-Baden, Germany; September 10 to September 15, 1962:

Robert O. Fehr; Cornell University;

International Federation of Information Processing Congress, Munich, Germany; August 27 to September 1, 1962:

Allen Kent; Western Reserve University; \$739

Philip J. Stone, III; Harvard University; \$967

International Instrumentation Conference, Geneva, Switzerland; July 16 to July 18,

1962 Richard J. Plano; Rutgers, The State

University; \$575

International Machine Tool Design and Research Conference, Birmingham, England; September 24 to September 28, 1962:

Alfred O. Schmidt; Marquette University; \$615

International Mathematical Summer Center on Eigenvalues, Chieti, Italy: August 1 to August 10, 1962:

Alexander Weinstein; University of Maryland; \$600

Berlin, Germany; May 28 to June 2, 1962: Meredith W. Morgan; University of

California; \$900 Henry W. Hofstetter; Indiana University; \$705

Alfred A. Rosenbloom, Jr., Illinois Col-

lege of Optometry; \$665

International Radiocarbon Conference, Cambridge, England; July 22 to July 28, 1962:
Wallace S. Broecker; Columbia University; \$486

Paul E. Damon; University of Arizona;

Richard Flint; Yale University; \$520 Edwin A. Olson; Whitworth College; \$823

Meyer Rubin; U.S. Geological Survey; \$520

International Road Federation, World Meeting, Madrid, Spain; October 14 to October 20, 1962:

Paul J. Claffey; Catholic University; \$557

International Symposium in Honor of Roger Boscovich, Dubrovnik, Yugoslavia; October 6 to October 11, 1961:

Churchill Eisenhart; National Bureau of Standards; \$705

L. Pearce Williams; Cornell University; \$730

Harry Woolf; Johns Hopkins University; \$180

International Symposium on Analytical Chemistry, Birmingham, England; April 9 to April 12, 1962:

Philip J. Elving; University of Michigan ; \$550 Louis Gordon; Case Institute of Tech-

nology; \$550 Philip W. West; Louisiana State University; \$650

International Symposium on Carbohydrate Chemistry, Birmingham, England; July 16 to July 20, 1962:

Melville L. Wolfrom; Ohio State University: \$550

International Symposium on Color Centers in Alkali Halides, Stuttgart, Germany; August 21 to August 24, 1962: W. Dale Compton; University of Illi-

nois; \$700

Robert J. Friauf; University of Kansas; \$575

Ronald Fuchs: Iowa State University; \$660

Albert Gold; University of Illinois: \$625

International Symposium on Enzymic Activity of the Central Nervous System, Goteborg, Sweden; June 17 to June 21, 1962; Claude F. Baxter; City of Hope Medi-

cal Center; \$1,000 Doris H. Clouet; New York State Re-

search Institute; \$500 Pierre M. Dreyfus; Massachusetts General Hospital; \$750

International Symposium on Equatorial Aeronomy, Huaychulo, Peru; September 18 to September 26, 1962:

Joseph Kaplan; University of California; \$700

International Symposium on Growth and Development of Archegoniate Plants, London, England; April 5 to April 6, 1962:

\$570

Neurology, Varenna, Italy; August 29 to September 1, 1961; International Brain Research Organization. Paris. France. search Organization, Paris, France; September 3 to September 5, 1961; Fifth International Congress of EEG and Clinical Neurophysiology, Rome, Italy; September 7 to September 18, 1961; and International Colloquium on Mechanisms of Sensory-Motor Integration, Pisa, Italy; September 18 to September 22, 1961:

H. W. Magoun; University of California; \$800

International Symposium on Inorganic Polymers, Nottingham, England; July 18 to July 21, 1961:

John C. Bailar, Jr.: University of Illinois; \$100

International Symposium on Molecular Structure and Spectroscopy, Tokyo, Japan; September 10 to September 15, 1962;

A. C. Albrecht; Cornell University; \$1,125 George D. Blyholder; University of Ar-

kansas; \$1,075 Columba Curran: University of Notre

Dame; \$1,000 Joseph de Heer; University of Colorado;

\$1.000 David M. Dennison: University of

Michigan; \$1,125 William H. Fletcher; University of

Tennessee; \$1,175 Arthur A. Frost; Northwestern University; \$1,090

Theodore D. Goldfarb; State University

of New York; \$1,125 H. S. Gutowsky; University of Illinois;

\$1,100 George R. Harrison; Massachusetts In-

stitute of Technology; \$1,150

Dudley R. Herschbach; University of California; \$860

Samuel Krimm; University of Michigan; \$1,125

Victor W. Laurie; Stanford University; \$860

Bruno Linder; Florida State University; \$1,225 Richard C. Lord; Massachusetts Insti-

tute of Technology; \$1,150 Sean P. McGlynn; Louisiana State

University; \$1,085

Foil A. Miller; Mellon Institute; \$1,-100

Kazuo Nakamoto; Illinois Institute of

Technology; \$1,090 Chester T. O'Konski; University of

California; \$1,125 Willis B. Person; State University of

Iowa; \$1,100

Paul N. Schatz; University of Virginia; \$750

Richard H. Schwendeman; Michigan State University; \$1,020

Robert C. Taylor; University of Michigan; \$750

E. Bright Wilson, Jr.; Harvard University; \$1,150

M. Kent Wilson; Tufts University; \$1,-150

Carl E. Wulfman; University of the Pacific; \$860

Max Ward; Glenville State College; | International Symposium on Relay Systems Theory and Finite Automata, Moscow, Russia; September 24 to October 2, 1962: E. J. McCluskey, Jr.; Princeton Uni-

versity; \$800

International Symposium on Soil-Plant-Atmosphere Water Relations and the Symposium on Environmental Control of Plant Growth and Micrometeorology, Canberra and Melbourne, Australia; August 22 to September 5, 1962:

Sterling A. Taylor; Utah State University; \$950

Frederick P. Zscheile, Jr.; University of California; \$1,050

International Symposium on Stratospheric and Mesospheric Circulation, West Berlin, Germany; August 20 to August 31, 1962:

Werner Schwerdtfeger; University of Wisconsin; \$700

International Symposium on the Application of Automatic Control in Prosthetics Design, Opatija, Yugoslavia; August 27 to September 1, 1962:

James B. Reswick; Case Institute of Technology; \$675

International Symposium on the Dynamics of Satellites, Paris, France; May 28 to May 31, 1962:

Robert M. L. Baker, Jr.; University of California: \$805 Samuel Herrick; University of California; \$525

International Symposium on the Organic Chemistry of Natural Products, Brussels, Belgium; June 12 to June 15, 1962:

Nelson J. Leonard; University of Illinois; \$625 Gloria G. Lyle; University of New Hampshire; \$550

Harry H. Wasserman ; Yale University ;

International Symposium on Volcanology, Tokyo, Japan; May 9 to May 19, 1962: Roy A. Bailey; U.S. Department of the

Interior; \$1,100 Robert W. Decker; Dartmouth College;

\$1,100 Armand J. Eardley; University of Utah;

\$775 Robert B. Forbes; University of Alaska;

\$750 Irving Friedman; U.S. Department of

the Interior; \$1,100
John J. Naughton; University of

Hawaii ; \$625 E. F. Osborn; Pennsylvania State Uni-

versity; \$1,100 Willard H. Parsons; Wayne State Uni-

versity; \$1,100 Donald William Peterson; U.S. Geo-

logical Survey; \$800 J. F. Schairer; Carnegie Institute of

Washington; \$1,100 Harry W. Smedes; U.S. Department of

the Interior; \$1,100 David Robert Wones; U.S. Department

of the Interior; \$1,100 Hatten S. Yoder, Jr.; Carnegie Institute of Washington; \$1,100

International Symposium on Wood Destruction by Fungi, Berlin, Germany; May 21 to May 31, 1962:

Arthur B. Anderson; University of California; \$850

International Union of Forest Research Organizations. Vienna, Austria; September 9 to September 22, 1961:

M. Victor Bilan; Stephen F. Austin

State College; \$1,200

Joint Meetings of the Regional Science Association and the Commission on Methods of Economic Regionalization of the International Geographical Union, Hague, Netherlands; September 4 to September 9, 1961:

Edward L. Ullman; Washington University; \$630

Mediterranean Regional Field Mission in Seismology and Earthquake Engineering,

Rome, Italy; March to May 1962:

Ray William Clough; University of California; \$1,500

Dariel Linehan; Weston Observatory; \$3,100

Meeting for the Study and Comparison of Collectors, Clermont-Ferrand, Dronlet France: November 6 to November 11, 1961: Paul B. MacCready, Jr.; Atmospheric Research Group; \$1,200

Meeting of Experts in the Field of Metal Forming, Paris, France; November 9 to November 10, 1961:

E. G. Thomsen; University of California; \$950

Meeting of the Bureau of the International Scientific Film Association, Paris, France; February 21 to February 25, 1962:

Randall McVay Whaley: Wayne State University ; \$1,011

Meeting of the Commission on Ancient Maps of the International Geographical Union, Florence, Italy; October 23 to October 25, 1961:

George Kish: University of Michigan; \$550°

Meeting of the Commission on National Atlases of the International Geographical Union, Budapest, Hungary; September 7 to September 10, 1962:

Carleton P. Barnes: U.S. Department of Agriculture; \$675

Meeting of the High Polymer Research Group, Moretonhampstead, Devon, England; May 14 to May 18, 1962:

Michael Szwarc; State University College of Forestry at Syracuse University; \$500

Meeting of the Institute of Mathematical Statistics, Dublin, Ireland; September 3 to September 7, 1962:

Albert H. Bowker; Stanford University, \$750

Gerald J. Lieberman; Stanford University; \$750

Ingram Olkin; Stanford University; \$750

Meeting of the Society for the Study of Human Biology, London, England; November 17 to November 19, 1961:

Bertram S. Kraus; University of Washington: \$665

Meeting of the Working Group for the Upper Mantle Project, Paris, France; March 19 to March 25, 1962:

R. P. Meyer; University of Wisconsin; \$700

Meeting on Geomorphology and Land Use Mapping, Athens, Greece; September 15 to September 25, 1962:

Richard F. Logan: University of Cali fornia; \$1,150

Meetings to Discuss Exchange of Scientific Information Between Brazil and the United States, with Particular Reference to a Possible Survey of Brazilian Scientific Information Activities, Rio de Janeiro and Sao Paulo, Brazil; August 20 to September 30, 1961:

Ronald Hilton; Stanford University; \$1,242

NATO Advanced Study Institute: Asymptotic Distribution, Breukelen, Netherlands; August 1 to August 11, 1962:

Henry M. Schaerf; Washington University: \$640

NATO Advanced Study Institute: Automatic Translation of Languages, Venice, Italy; July 15 to July 31, 1962: Victoria A. Fromkin; University of

Victoria A. Fre California; \$730

Sheila A. Greibach; Harvard University; \$620

Amelia Janiotis; Wayne State University; \$150

Harry H. Josselson; Wayne State University; \$150 Richard L. Venezky; Cornell Univer-

sity: \$460

NATO Advanced Study Institute: Combinatorial Methods in Probability Theory and Algebraic Topology, Aarhus, Denmark; August 1 to August 10, 1962:

Edgar Reich; University of Minnesota; \$530

NATO Advanced Study Institute: Dispersion and Absorption of Sound by Molecular Processes, Varenna, Italy; August 6 to August 18, 1962:

Warren P. Mason; Bell Telephone Laboratories; \$470 C. Leonard O'Connor; Manhattan Col-

lege; \$610

NATO Advanced Study Institute: Elementary Particles, Varenna, Italy; July 23 to August 4, 1962:

Rafe A. Burnstein; University of Maryland; \$630 George Gidal; University of California;

NATO Advanced Study Institute: Evaluation of Stars, Varenna, Italy; August 20 to September 1, 1962:

\$850

Marshal H. Wrubel; Indiana University; \$530

NATO Advanced Study Institute: Excitations in Semi-conductors: Polarons and Excitons, St. Andrews, Fife, Scotland; July 30 to August 18, 1962:

Donald H. Kobe; Ohio State University; \$520

William H. Taylor, II; Princeton University; \$430

George Whitfield; University of Illinois; \$450

NATO Advanced Study Institute: Excita-tions in Semi-conductors; Polarons and Excitons, St. Andrews, Scotland; June 25 to June 30, 1962; and NATO Advanced Study Institute: Many-body Problems and High Energy Physics, Cargese, Corsica; July 30 to August 18, 1962:

David Pines; University of Illinois; \$470

NATO Advanced Study Institute; Geophysics, Les Houches, France; July 2 to August 25, 1962:

W. Abraham; Radcliffe Col-Barbara lege; \$300

NATO Advanced Study Institute: Group Theoretical Methods and Concepts in the Theory of Elementary Particles, Istanbul, Turkey; July 16 to August 4, 1962:

Sidney Coleman; Harvard University; \$770

Kenneth Nordtvedt, Jr.; Stanford University; \$1,060

NATO Advanced Study Institute: Imperfections in Solids, Rhodes, Greece; July 2 to July 20, 1962:

Ronald L. Odle; University of Illinois; \$860

NATO Advanced Study Institute: International Conference on Elementary Particles, Bergen, Norway: May 28 to June 15, 1962:

William C. Ramsay; University of California; \$810

Valentine L. Telegdi; University of Chicago; \$480

Sam B. Treiman; Princeton University; \$430

NATO Advanced Study Institute: Manybody Problems and High Energy Physics, Cargese, Corsica; July 1 to July 10, 1962: John Bardeen; University of Illinois; \$480

NATO Advanced Study Institute: North-Atlantic Biotae and Their History, Reykjavik, Iceland; July 12 to July 25, 1962:

Margaret B. Davis; University of Michigan; \$440

Alton M. Harvill, Jr.; Murray State College: \$490

Bruce C. Heezen; Columbia University; \$280

Knut J. Norstog; Wittenberg University; \$460

NATO Advanced Study Institute on Feldspars, Oslo, Norway; June 20 to June 30, 1962:

Bruce E. Brown: University of Wis-

consin; \$480 Philip M. Orville; Cornell University; \$450

David B. Slemmons; University of Nevada; \$630

NATO Advanced Study Institute: Plasma Theory, Varenna, Italy; July 9 to July 21, 1962:

Harold P. Furth; University of California; \$670

Nicholas A. Krall; John Jay Hopkins Laboratory for Pure and Applied Science; \$860

Bruce B. Robinson; University of California; \$860

Peter A. Sturrock : Stanford University ; \$680

NATO Advanced Study Institute: Radio-Astronomy, Manchester, England; June 26 to July 7, 1962:

John R. Dickel; University of Michigan; \$560

Edward J. Fremouw; University of Alaska; \$800

NATO Advanced Study Institute: Scientific Photography, Liege, Belgium; September 10 to September 22, 1962: Jack Fajer; Brandeis University; \$540 Michael M. Mizianty; Lehigh Univer-

sity; \$550 Felix Viro; Photo and Repro Group of GAF; \$560

NATO Advanced Study Institute: Solid State Physics, Ghent, Belgium; July 23 to August 2, 1962:

Norman N. Axelrod: University of Delaware: \$540

W. Beall Fowler; Argonne National Laboratory; \$600

Kay K. Kanazawa; University of Illinois; \$640

Howard K. Rockstad; University of Illinois; \$650

NATO Advanced Study Institute: Space Exploration and the Solar System, Varenna, Italy; June 4 to June 16, 1962:
Giovanni Lanza; Northeastern Uni-

versity; \$590 Victor H. Regener; University of New

Mexico; \$800 Howard L. Weisberg; Brandels University; \$590

NATO Advanced Study Institute: Stellar Evolution, Varenna, Italy; August 20 to

September 1, 1962:
Maurice M. Shapiro; U.S. Naval Research Laboratory; \$490

NATO Advanced Study Institute: Stratospheric and Mesospheric Circulation, West Berlin, Germany; August 20 to August 31, 1962:

Julius London; University of Colorado; \$580

NATO Advanced Study Institute: Study of Upper Atmosphere Phenomena by Satellites and Radio Astronomical Methods, Corfu.

Greece; June 18 to July 2, 1962: Hilde Kallmann-Bijl; University

California; \$780 James W. Warwick; University Colorado; \$750

International Spring School Physics: Cybernetics of Neural Processes,

Naples, Italy; April 26 to May 13, 1962:
Robert W. Doty; University of Roches-

ter; \$500 Celeste Faye McCollough; Oberlin College; \$670

George W. Zopf, Jr.; University of Illinois; \$520

OECD Seminar on Research Management. Copenhagen, Denmark; September 25 to September 29, 1961:

Schrade Radtke; American Zinc sociation, Lead Industries Association; \$917

OECD Seminar on The Reform of the Teaching of Biology, La Tour de Peilz, Switzerland; September 4 to September 14, 1962:

Tracy M. Sonneborn; Indiana University; \$890

Chemistry Study Group, Organic France; September 5 to September 12, 1962; Gilbert Stork: Columbia University: \$580

Organic Geochemistry Group, Milan, Italy; September 10 to September 12, 1962: Egon T. Degens; California Institute

of Technology; \$900 Peter H. Given; Pennsylvania State University: \$515

sity; \$600

Carl H. Oppenheimer; University of Miami: \$750

Conference, London, England: September 3 to September 7, 1962: Robert B. Brode; University of Cali-

fornia; \$775

Pyridoxal Symposium, IUB; Rome, Italy; October 1962:

American Society of Biological Chemists, Inc.; \$12,300

Regional Conference of Southeast Asian Geographers, Kuala Lumpar, Malaya; April 2 to April 23, 1962:

Joseph Earle Spencer; University of California; \$1,100

M. Gordon Wolman; Johns Hopkins University; \$1,800

Research Institute in Group Theory, Oberwolfach, Germany; October 9 to October 14, 1961:

Donald Gordon Higman; University of Michigan; \$450 Daniel R. Hughes; University of Mich-

igan: \$600

Research Vessel Forum, Tokyo, Japan; September 18 to September 30, 1961: Wayne V. Burt; Oregon State Univer-

sity; \$800

The Rutherford Jubilee International Conference, Manchester, England; September 4 to September 8, 1961:

Harry D. Holmgren; University of Maryland; \$600

Seminar on Latin American Area Seismology and Earthquake Engineering, Santiago, Chile: December 5 to December 12, 1961:

Perry Byerly; University of California; \$1,500

Jack E. Oliver; Columbia University, Palisades; \$1,350

Seminar on Theoretical Physics, Trieste, Italy; July 16 to August 25, 1962: James S. Ball; University of Cali-

fornia: \$700 Nina Byers; University of California:

\$800

Series of Lectures at Academy of Science of USSR and Visit Laboratories in the Soviet Union; October 1 to October 22, 1962: Joseph Martin; Pennsylvania State University; \$830

Solid State Colloquium, Rio de Janeiro,

Brazil; August 1 to August 20, 1962: Walter J. Moore; Indiana University; \$700

Solvay Congress, Brussels, Belgium; October

9 to October 14, 1961: Richard P. Feynman; California Institute of Technology; \$800
Julian Schwinger; Harvard University;

\$525

Some Aspects of Electrochemistry, New Delhi, India; October 6 to October 7, 1961: Raymond M. Fuoss; Yale University; \$1,175

Soviet-American Exchange of Scientists and Travel to Meetings in U.S.S.R., Italy and Hungary:

University of California: \$7,500

Symposium in Commemoration of the Fiftieth Anniversary of the Discovery of X-ray Dif-

Bartholomew Nagy; Fordham Univer- | fraction and of Crystal Structure Analysis, Munich, Germany; July 25 to July 27, 1962: Charles W. Burnham; Carnegie Insti-

tute of Washington; \$610

Gunnar Kullerud; Carnegie Institute of Washington; \$610

Martin E. Straumanis; Missouri School of Mines and Metallurgy; \$580

Symposium of Spectroscopists, Bombay, India and Indian Science Congress, Cuttack, India; December 20, 1961 to January 20, 1962:

Robert S. Mulliken; University of Chicago; \$2,000

Symposium on Arborviruses, Rio de Janeiro. Brazil; September 11 to September 14, 1961: William L. Pond; New England Institute for Medical Research: \$950

Symposium on Biological Organization at Cellular and Supra-Cellular Levels, Varenna, Italy; September 24 to September 27, 1962:

Renato Dulbecco ; California Institute of Technology; \$900

James C. King; Columbia University: \$600

A. A. Moscona; University of Chicago: \$700

David L. Nanney; University of Illinois; \$800

Symposium on Brain Oedema, Vienna, Austria; Organizational Meeting to Plan the Next International Electroencephalography Congress, Wassenaar, The Netherlands; International Physiology Congress, Leiden, The Netherlands; Symposium on Neurochemical Regulators of Brain Activity, Paris, France; and Symposium on the History of the Brain, Munster, Germany; August and September 1962:

Mary A. B. Brazier; University of California Medical Center: \$1,200

Symposium on Cavitation, Sendai, Japan; September 2 to September 7, 1962:

John P. Breslin: Stevens Institute of

Technology; \$291

Symposium on Cell Growth and Cell Division, Liege, Belgium; May 19 to May 24, 1962:

Seymour Gelfant; Syracuse University: \$600

Lester Goldstein : University of Pennsyl-

vania; \$550 Henry I. Hirshfield; New York University; \$550

Thomas W. James; University of California; \$800

Daniel Mazia; University of California; \$835

D. M. Prescott; Oak Ridge National Laboratory; \$600

Herbert Stern; University of Illinois: \$650

Hewson Swift; University of Chicago; \$600

J. Herbert Taylor; Columbia University; \$550

Symposium on Cellular Basis and Actiology of Late Somatic Effects of Ionizing Radiation, London, England; March 27 to March 30, 1962:

George W. Casarett; University of Rochester; \$800

Jacob Furth; Columbia University; \$500

Hermann Lisco; Argonne National Laboratory; \$600

Hermann Joseph Muller: Indiana University; \$500

Symposium on Chemoreceptors, Stockholm, Sweden; September 3 to September 5, 1962; Robert M. Benjamin; University of Wisconsin: \$200

A. J. de Lorenzo; Johns Hopkins University; \$650

Vincent G. Dethier; University of Pennsylvania; \$630 Robert P. Erickson; Duke University;

\$690

David R. Evans; Johns Hopkins University; \$650 Irving Y. Fishman; Grinnell College;

\$790

Robert C. Gesteland; Massachusetts Institute of Technology; \$610 Bruce P. Halpern; State University of

New York; \$650 Morley R. Kare; North Carolina State College; \$690 Maxwell M. Mozell; State University of

New York; \$650 Ross Maris Pangborn; University of California; \$860

Symposium on Climatic Change, Italy; October 2 to October 7, 1961: Jacob Bjerknes; University of California: \$1.025

Symposium on Clusters and Stellar Evolution, Greenwich, England; August 7 to August 10, 1962:

Robert R. Brownlee; University of Cali-

fornia; \$783 Olin J. Eggen; California Institute of Technology; \$790

Louis G. Henyey; University of California; \$850

George H. Herbig; University of Cali-

fornia; \$850 Ivan R. King; University of California;

\$550 Martin Schwarzschild: Princeton Uni-

versity; \$500 Allan R. Sandage; Mt. Wilson, Palomar

Observatory; \$850 Merle F. Walker; University of California; \$850

Symposium on Continental Erosion, Bari, Italy; October 1 to October 6, 1962:

Lucien M. Brush, Jr.; State University of Iowa; \$850

Symposium on Crack Propagation, Cranfield, England; September 25 to September

29, 1961: James P. Romualdi: Carnegie Insti-

tute of Technology; \$540 Max L. Williams, Jr.; California Insti-tute of Technology; \$755

Symposium on Electromagnetic Theory and Antennas, Copenhagen, Denmark; June 25 to June 30, 1962:

B. A. Auld; Stanford University; \$794 Sidney Borowitz; New York University; \$562

Dimitri S. Bugnolo; Columbia University; \$562

Donald A. Darling; University of Michigan: \$621

Georges A. Deschamps; University of Illinois; \$666

Hideya Gamo; IBM Corporation; \$562 J. Mayo Greenberg; Rensselaer Polytechnic Institute; \$584

Albert E. Heins; University of Michigan; \$621

Edward C. Jordan; University of Illinois; \$666

Samuel N. Karp: New York University: \$575

Irvin W. Kay; New York University: \$325 Nicholas D. Kazarinoff; University of

Michigan; \$621 Ronold W. P. King; Harvard Univer-

sity; \$558 Nathan Marcuvitz; Polytechnic Insti-

tute of Brooklyn; \$562

Arthur A. Oliner; Polytechnic Institute of Brooklyn; \$562 Martin A. Plonus; Northwestern Uni-

versity; \$562 Charles C. Rogers; Rose Polytechnic Institute; \$672

V. H. Rumsey; University of Califor-

nia; \$794
Emil Wolf; University of Rochester; \$600

Symposium on Engineering Aspects of Environmental Control, Melbourne, Australia; August 31 to September 5, 1962;

S. H. Cameron; University of California; \$1,050

Symposium on Functional Anatomy of the Cardiovascular System, London, England; November 28 to November 29, 1962; Donald F. M. Bunce, II; Tulane Univer-

sity School of Medicine; \$840

Symposium on General Topology and Its Relations to Modern Analysis and Algebra, Prague, Czechoslovakia; September 1 to September 8, 1961:

R. D. Anderson; Louisiana State Uni-

versity; \$725 John L. Kelley; University of California; \$875

Barry Mazur; Harvard University; \$650

Symposium on Ground Water in Arid Regions, Athens, Greece; October 12 to October 20, 1961: George B. Maxey; Illinois State Geo-

logical Survey; \$900 David K. Todd; University of California: \$750

Symposium on Ignimbrites and Hyaloclastites, Catania, Sicily, Italy; September 15 to

September 24, 1961: Earl F. Cook: University of Idaho: \$825

Charles J. Vitaliano; Indiana University; \$800

Seminar on Immune Tolerance Towards Specific Antigens and Its Implication in Relation to Present Theories of Antibody Synthesis, Royaumont, France: June 24 to June 28, 1962:

Richard T. Smith; University of Florida; \$650

William O. Weigle; Scripps Clinic & Research Foundation; \$800

Harold R. Wolfe; University of Wisconsin; \$720

Symposium on Insect Polymorphism, London, England: September 20 to September 25, 1961:

Theodosius Dobzhansky; Columbia University; \$800

Symposium on Ionospheric Soundings in the IGY/IGC, Nice, France; December 11 to December 16, 1961:

Erwin R. Schmerling; Pennsylvania State University: \$650

Symposium on Mammalian Tissue Culture and Cytology, Sao Paulo, and Symposium on Radiobiology, Rio de Janeiro, Brazil; October 1962:

Harry Eagle; Yeshiva University; \$950 L. D. Hamilton; Sloan-Kettering Insti-tute for Cancer Research; \$630

David A. Hungerford; Institute for Cancer Research; \$800

Henry S. Kaplan; Stanford University; \$775

Paul S. Moorhead; Wistar Institute; \$700

Susumu Ohno; City of Hope Medical Center; \$900

Jack Schultz; Institute for Cancer Research; \$950

Symposium on Mechanisms of Immunological Tolerance, Prague, Czechoslovakia, November 8 to November 10, 1961;

John M. Converse; New York University; \$145

Nathan Kaliss; Roscoe B. Jackson Memorial Laboratory; \$555

Andrew A. Kandutsch; Roscoe B. Jackson Memorial Laboratory; \$145

Carlos Martinez; University of Minnesota; \$605

Ray D. Owen; California Institute of Technology; \$665

Philip Y. Paterson; New York University; \$450

Richmond T. Prehn; University of Washington; \$645

Paul S. Russell; Columbia University;

Eli Sercarz; Harvard University; \$470 Richard T. Smith; University of Florida; \$585

Chandler A. Stetson; New York University; \$470

Paul Terasaki; University of California; \$725

Symposium on Non-Linear Oscillations, Kiev, U.S.S.R.; September 12 to September 18, 1961:

Henry A. Antosiewicz; University of Southern California; \$1,200

Earl A. Coddington; University of California; \$1,075 Stephen P. Diliberto; University of

California; \$1,075

Jack K. Hale; Martin Company; \$950 Solomon Lefschetz; Martin Company; \$950

Warren S. Loud; University of Minnesota; \$1,000

Lawrence Markus; University of Minnesota; \$525

Stephen Smale; University of California; \$1,050

Wolfgang R. Wasow; University of Wisconsin; \$975

Symposium on Optimizing and Self-Adaptive Systems Theory, Rome, Italy; April 26 to April 28, 1962:

Rudolf F. Drenick; Polytechnic Institute of Brooklyn; \$140

Yao Tzu Li; Massachusetts Institute of Technology; \$160

John G. Truxal; Polytechnic Institute of Brooklyn; \$140

Symposium on Radiobiology, Rio de Janeiro, Brazil, and Symposium on Tissue Culture and Cytology, Sao Paulo, Brazil; October 22 to October 31, 1962: Stanley M. Gartler; University

Washington; \$900

Symposium on Repair From Genetic Radiation Damage and Differential Radiosensitivity in Germ Cells, Leiden, Holland; August 16 to August 19, 1962:

H. Bentley Glass; Johns Hopkins University; \$600

Philip T. Ives; Amherst College; \$600 Liane Brauch Russell; Oak Ridge National Laboratory; \$700 William Lawson Russell; Oak Ridge

National Laboratory; \$700

Symposium on Second Order Effects in Elasticity, Plasticity and Hydrodynamics, Haifa, Israel; April 22 to April 27, 1962:

William P. Graebel; University Michigan; \$920

Paul Lieber; University of California; \$1,150

Daniel Rosenthal; University of California: \$877

Symposium on Space Communication Research, Paris, France; September 18 to September 22, 1961:

Arthur H. Waynick; Pennsylvania State University; \$565

Symposium on Speciation in the Sea, Plymouth, England; September 27 to September 29, 1961:

Edward C. Raney; Cornell University; \$726

Symposium on the Cycle and the Isotopic Composition of Atmospheric Gases, Utrecht, The Netherlands; August 8 to August 14, 1962:

Richard D. Cadle; Stanford Research Institute: \$900

Symposium on the Durability of Concrete, Prague, Czechoslovakia; August 1 to August 6, 1961:

Merit P. White; University of Massachusetts: \$615

Symposium on the Physiological Effect of High Altitude, Interlaken, Switzerland; September 18 to September 21, 1962:

Robert W. Elsner; University of California; \$500

George A. Feigen; Stanford University: \$1,100

Symposium on the Primates, London, England; April 12 to April 14, 1962;
Richard John Andrew; Yale Univer-

sity; \$500 Neil C. Tappen; Tulane University

School of Medicine; \$630

Symposium on the Primates, London, England; Symposium Primatologicum, Giessen, Germany; To Study Primate Collections, Copenhagen, Stockholm, London, Munich and Leiden; April 1962:

George Emil Erikson; Harvard Medical School; \$700

Symposium on the Programming and Utilization of Research Reactors, Vienna, Austria; October 16 to October 20, 1961:

Robert G. Cochran; Agricultural and Mechanical College of Texas; \$795

Henry J. Gomberg: University of Michi- | Symposium on Tissue Transplantation Probgan; \$642 Glenn Murphy: Iowa State University: \$728

Reiffel; Leonard

Foundation; \$674 Forrest J. Remick; Pennsylvania State

Armour Research

University; \$685

Theos J. Thompson; Massachusetts Institute of Technology: \$572

Symposium on the Research of Influence of Psychotropic Drugs on Higher Nervous Functions, Prague, Czechoslovakia; October 31 to November 3, 1961:

Bernard Lawrence Busfield, Jr.; Massachusetts Mental Health Center; \$910 C. B. Ferster; Indiana University School

of Medicine; \$1,260 James Olds; University of Michigan;

\$1,000

Murray Sidman : Walter Reed Army Institute of Research: \$690

Symposium on the Structure of Natural Products, Rio de Janeiro, Brazil; November 6 to November 10, 1961:

Ernest Wenkert; University of California: \$800

Symposium on the Variations of Existing Glaciers, Obergurgl, Austria; September 10 to September 18, 1962: Kermit B. Bengtson; University of

Washington; \$900

Richard P. Goldthwait: Ohio State University; \$690

G. William Holmes; U.S. Geological Survey; \$650

Troy L. Pewe; University of Alaska; \$950

Symposium on Theoretical Interpretations of Upper Atmosphere Emissions, France; June 25 to June 29, 1962: Paris.

John C. Brandt; University of California; \$1,100

Sydney Chapman; High Altitude Observatory; \$71 Kenneth C. Clark; University of Wash-

ington: \$199

Thomas M. Donahue; University of Pittsburgh; \$700

Paul J. Kellogg; University of Minne-

sota; \$822 Reginald E. Newell; Massachusetts In-

stitute of Technology; \$95
John F. Noxon; Harvard University;

\$620

Manfred H. Rees; University of Colorado; \$850

Walter Roth; Armour Research Foundation of Illinois Institute of Technology; \$625

Brian P. Sandford; Arctic Institute of North America; \$625

Takao Tohmatsu: National Bureau of

Standards; \$850 Robert A. Young; Stanford Research Robert A. You Institute; \$900

Symposium on Theoretical Organic Chemistry; Leningrad, U.S.S.R.; December 12 to December 15, 1961:

William von Eggers Doering; Yale University; \$747

John D. Roberts; California Institute of Technology; \$747

R. B. Woodward; Harvard University; \$693

lems, Santiago, Chile; August 80 to September 2, 1961:

Milton Goldstein; Roswell Park Memorial Institute: \$1,000

Symposium on Topology and Its Methods in Other Mathematical Disciplines, Prague, Czechoslovakia; September 1 to September 9, 1961; and Symposium on Scientific Research and Development in a Modern Industrial Economy, Dusseldorf, Germany; September 27 to October 3, 1961:

Richard Courant ; New York University ;

Symposium on Zooplankton Production, Copenhagen, Denmark; October 8 to October 10, 1961 :

Karl Banse: University of Washington:

\$1,136

W. T. Edmondson; University of Washington; \$1,136

Charles S. Yentsch; Woods Hole Oceanographic Institute; \$851

Technical Committee 24-Electric and Magnetic Magnitudes and Units of IEC, Bucharest, Roumania; June 28 to July 3, 1962: Carl C. Chambers; University of Pennsylvania; \$740

To Deliver a Series of Lectures in Poland; June 1962:

Jerzy R. Moszynski: Case Institute of Technology; \$720

To Determine the Scientific and Engineering Aspects of Corrosion Work, U.S.S.R.; Summer 1962 :

National Association of Corrosion Engineers; \$6,500

To Discuss the Photochemistry of Condensed Systems with Foreign Experts in France, U.S.S.R., Sweden, Holland, and England; March 20 to June 16, 1962:

Robert Livingston; University of Minnesota; \$900

To Engage in Research in Social Psychology, The Netherlands, West Germany, France, and Italy; March and May 1962:

Theodore R. Sarbin; University of California; \$400

To Perform Research in Soil Mechanics and Visit Research Centers, Denmark, Finland, Sweden, Germany, and Switzerland; June 1962 to January 1963:

James N. Luthin; University of California; \$790

Translation Program of the American Geological Institute, Leningrad, and Moscow, U.S.S.R.; September 1 to December 31, 1961: Herbert E. Hawkes; University of Cali-

Translation Project of the Arctic Institute of North America, Moscow, Leningrad, Irkutsk, and Yakutsk, U.S.S.R.; June 15 to July 7, 1962:

fornia; \$1,573

Henry N. Michael; Temple University; \$2,415

UNESCO Seminar on Physical and Natural Sciences, Gauting/Munchen, West Germany; May 11 to May 16, 1962:

Watson Davis: Science Service: \$600

United Nations Conference on New Sources of Energy, Rome, Italy; August 21 to August 31, 1961:

Harry E. Thomason; Office of the Chief Signal Officer; \$900

U.S. Participation in UNESCO Latin Ameri- | Science, Prague, Czechoslovakia; October 15 can Regional Field Mission in Seismology and Earthquake Engineering, Santiago, Chile; October 1961 to December 1961:

Daniel Lineham; Weston Observatory; \$1,500

Use of the Computer in Anthropology, Burg-Wartenstein, Austria; June 20 to June 29, 1962:

Wenner-Gren Foundation for Anthropological Research; \$3,500

Visiting Protein Chemistry Laboratories in Copenhagen, Denmark; Moscow, Leningrad, and Kiev. U.S.S.R.; and Prague, Czechoslovakla; 1962:

Charlotte Green Schellman: University of Oregon; \$1,200

Visiting the Czechoslovak Academy of

to October 22, 1961:
Herman Pines; Northwestern University; \$700

Visits to European and Scandinavian Laboratories; September, 1962:

James B. Lackey; University of Florida: \$240

World Federation of Neurology, Como, Italy; August 29 to September 6, 1961; Interna-Congress, Electroencephalography tional Rome, Italy; September 7 to September 18, 1961; and International Colloquium on Mechanisms of Sensory-Motor Integration, Pisa, Italy; September 18 to September 22, 1961:

Mary A. B. Brazier; University of California; \$800