Manuscripts, Maps, Rare Books, Prints and Photographs, and Orientalia Divisions—the last-named consisting of Chinese, Hebraic, Japanese, Near East, and South Asia Sections. Consequently, while the bulk of the total science collection is located conventionally in the Stack and Reader Division, valuable parts of it are found in localized areas of special divisions. To cite but a few examples, first editions of Copernicus' *On the Revolutions of the Spheres* and Sir Isaac Newton's *Principia* are with Rare Books; the original manuscript of Albert Einstein's *Das Bi-Vektor Field* is with the Manuscripts Division as also are letters and papers of a number of other scientists; certain writings of Dayton C. Miller which have scientific value are in the Music Division, and so forth. Thus, considerations of over-all library organization, as well as of bulk, make it both undesirable and impractical to attempt to group all science holdings in a single stack area adjacent to a science reading room.

Now, having seen something of what the Library of Congress Science Division is not going to be, let us turn to what is envisioned for it. Raymund L. Zwemer, chief of the new division, sees its over-all task as involving both an internal responsibility to the rest of the Library and an external one to science as a whole. Internally, the Science Division must become and constantly remain aware of the exact extent, nature, and whereabouts of the scientific portions of the Library's total collection and be in a position to supply this information efficiently to the rest of the staff. Companion to this responsibility is the additional one of standing ready to advise and counsel with the other units of the Library in the acquisition and processing of scientific books and periodicals and in the adaptation of various technical advances to library operations.

Prerequisite to the discharge of any external responsibility is an internal one already mentioned—that of maintaining full and organized knowledge of the Library's science collections. It is not believed, however, that this knowledge and the Division's energies should be devoted to providing the kind of general technical reference service to which college students, writers of club papers, quiz contestants, and the like might write for scientific facts, figures, and quotations. (And, indeed, with its present initial staff, the provision of such service would be physically impossible even if it were deemed appropriate.) It is felt rather that the service which this division can render science should be something much greater than would be implied by maintaining such a question-and-answer department, and would consist fundamentally in making scientists and the scientific agencies of the nation aware of the facilities and holdings of possible interest to them, which are available in the Library of Congress. Beyond this, the advice of scientists and scientific organizations is earnestly sought with regard to specific ways in which the Library can serve science. Particularly valuable will be the opinions of experts regarding the completeness of present holdings in their respective fields of specialization and the gaps that can be filled most profitably.

To complete this brief description of the Science Division, two projects being carried on within it for the Armed Services can be mentioned. One is the Navy Research Section which operates under an Office of Naval Research contract and provides for the Navy bibliographic control and conventional library services—including cataloging, indexing, abstracting, and bibliography preparation—for technical reports resulting from government-sponsored research. This Section also is the official repository for all scientific reports of the World War II Office of Scientific Research and Development. The other Armed Services task is supported by the Corps of Engineers and involves provision of certain bibliographic services in the field of interest of that branch's Snow, Ice and Permafrost Research Establishment.

DWIGHT E. GRAY

THE PHOENIX PROJECT

ANN ARBOR'S RESEARCH CENTER

The University of Michigan's privately financed atomic research project, which promises to be unique in this country as a nongovernment-supported program designed to explore the field, formally came into being last October with the opening of a fund-raising drive and the announcement that some twenty research studies already were under way at Ann Arbor. Known as the Phoenix Project, the proposed research center will carry out a broad investigation of all constructive aspects of atomic energy research. All fourteen of the University's divisions (schools, colleges, and specialized institutes) will be actively involved in the project's work, which will include studies of social, economic, and cultural developments peculiar to life in the atomic age. Medical and biophysical research is expected to play a large part in the work of the new project, as will laboratory studies of cellular, molecular, and atomic processes.

The phoenix symbol, a direct derivative of that Egyptian bird, which, it is said, once rose again triumphant from its own well-cremated ashes, provides a note of quiet optimism unsullied by any inclusion of contracts for classified federal research at Michigan. While the Phoenix Project cannot hope entirely to compete with government-financed research in terms of wealth or equipment, still it is expected by those at Ann Arbor and elsewhere that much progress will be made (and that an example may be set which others will follow) in exploring the peace-time potentials of atomic energy.

ISOTOPE WORK AT OAK RIDGE

NEW ORINS COURSES

The special training division of the Oak Ridge Institute of Nuclear Studies has announced that three additional courses in the techniques of using radioisotopes in research have been scheduled during the winter and spring of 1951. They are to be held from January 8th to February 2nd, from February 19th to March 16th, and from April 16th to May 11th. Designed to acquaint research workers with the safe and efficient use of radioisotopes, the courses include laboratory work, lectures, and special-topic seminars. Experiments cover such matters as the use and calibration of instruments, purification and separation of radioactive materials from inert and other radioactive materials, and pile activation technology. The seminars cover various biological and medical uses of radioisotopes and the design of radiochemical laboratories.

Only thirty-two participants can be accommodated for any single course. Additional information and application blanks may be obtained from Dr. Ralph T. Overman, Chairman, Special Training Division, Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tennessee.

On February 5th a special two-weeks' advanced medical course in radioisotope work will be given by the Institute which will deal with radioisotopes in therapy and clinical studies. The course, intended for medical research workers who have had some experience in the basic techniques of using radioisotopes, will have as its lecturers specialists from

the Oak Ridge National Laboratory, staff members of the medical and special training division of the Institute, and specialists from hospitals where radioisotopes have been used.

ENRICHED SAMARIUM

All of the known naturally occurring isotopes of samarium have been enriched successfully in milligram quantities by the electromagnetic separation process. Milligram quantities of each of the enriched isotopes will be loaned in the usual manner through the Isotopes Division of the Atomic Energy Commission for use in such investigations as spectral shifts, nuclear reaction cross sections and mass assignments of both natural and induced radioactivities. The samarium oxide end product is of high chemical purity, with europium the only appreciable contaminant. The mass analyses of the enriched isotopes are given in Table I. Data on the natural samarium isotope has been reported by M. G. Inghram, C. C. Hess, Jr., and R. J. Hayden in the *Physical Review* (73, 180; 1948).

TABLE I—Mass Analyses of the Enriched Isotopes

Isotope	144	147	148	149	150	152	154	Natural Samarium
	Atomic Percent							
144	72.13	1.10	0.522	0.547	0.191	0.122	0.034	3.16
147	7.69	81.63	6.050	5.09	2.02	1.57	0.362	15.07
148	4.40	6.96	76.01	11.88	1.96	1.59	0.361	11.27
149	4.41	3.94	10.72	71.53	7.02	1.82	1.70	13.84
150	1.94	1.20	2.54	3.98	74.09	1.06	1.20	7.47
152	5.52	3.41	2.76	4.85	11.84	89.90	4.25	26.63
154	3.91	1.77	1.40	2.13	2.89	3.93	92.10	22.53

This separation was accomplished by the joint efforts of most of the personnel of the Isotope Research and Production Division. Special recognition is due S. F. Fairbourne for directing the preparation of anhydrous samarium chloride for charge material, L. O. Love for his leadership in the actual calutron operations, K. A. Allen who chemically purified the isotopic products, and D. D. Smith who performed spectrographic chemical analyses. The division is indebted to R. F. Hibbs and J. W. Redmond of the Y-12 Mass Spectrometer Laboratory for mass analyses.

This report is based on work performed under contract for the Atomic Energy Commission by the Y-12 Plant of the Carbide and Carbon Chemicals Division of Union Carbide and Carbon Chemicals Corporation.

C. P. Keim, H. W. Savage, and Boyd Weaver
Oak Ridge National Laboratory Y-12 Area

GRANTS AND AWARDS

RESEARCH CORPORATION

Research Corporation has announced that an additional sixty-two research projects, mostly in the fields of physics, chemistry, mathematics, and engineering, are receiving support under the Corporation's program of grants-in-aid. The awards have been allocated to colleges, universities, and scientific institutions in twenty-seven states and the District of Columbia, and bring to a total of more than $700,000 the funds granted during the current fiscal year.

SIGMA DELTA EPSILON

The Sigma Delta Epsilon Graduate Women's Scientific Fraternity has announced that applications for its postdoctoral fellowship for 1951–52 should be submitted before February 1, 1951. Applicants must have the equivalent of a PhD and must be engaged in research in the mathematical, physical, or biological sciences. Application blanks and further information may be secured from Dr. Mayme I. Logsdon, the University of Miami, Coral Gables 46, Florida.

JOBS AVAILABLE

NAVAL RESEARCH LABORATORY

The Naval Research Laboratory has indicated a deep interest in locating people with training in physics, electrical engineering, and electronics for a number of positions in these fields which are now open and which the Laboratory wishes to fill as soon as possible. Civil Service status is not at present a prerequisite for consideration for these positions. Further information may be obtained by writing to the Personnel Division, Code 1817, Naval Research Laboratory, Washington 25, D. C.

AIR FORCE RESEARCH LABORATORIES

The recently organized Geophysical Research Directorate of the Air Force Research Laboratories at Cambridge, Massachusetts has announced that positions for physicists are open and that civil service examinations are being given to fill them. The work is concerned with atmospheric and terrestrial physics, electromagnetics, and cloud mechanics. Further information and application forms may be obtained at most post offices, from regional civil service offices, or from the U. S. Civil Service Commission in Washington.

Eugene Gardner

Eugene Gardner, University of California nuclear physicist, died on November 27th at Permanente Hospital, Vallejo, California, after an extended illness which has been attributed to beryllium poisoning. He was thirty-seven years of age. Dr. Gardner, who, with C. M. G. Lattes, first discovered evidence that mesons had been produced by the Berkeley cyclotron, was closely associated with the atomic energy project from the time of its inception. From 1941 to 1943 he worked at the Berkeley Radiation Laboratory on the uranium isotope separation problem, and during 1944 and 1945 he continued this work at Oak Ridge. Before returning to Berkeley he was for a time on the staff of the Los Alamos Scientific Laboratory. A graduate of Utah State Agriculture College and a native of Utah, he received his PhD at the University of California in 1943. He was a member of the American Physical Society.

Leland B. Snoddy

Leland B. Snoddy, for seventeen years a member of the faculty of the University of Virginia's school of physics, died November 12th in University Hospital at Charlottesville at the age of fifty-two. Dr. Snoddy, who was born in Ohio, studied at Transylvania College and the Universities of Kentucky, California, and Virginia, receiving his doctorate at the latter institution in 1929. He taught physics at Lynchburg College from 1925 to 1928, after which he received the Edison Research Fellowship and until 1933, when he joined the Virginia faculty, was a research physicist with the General Electric Company. During the last war he was associated with research and development work for the OSRD, the Army, and the Navy. Dr. Snoddy was a member of the council of the Oak Ridge Institute of Nuclear Studies and was a fellow of both the Physical and the Optical Societies. He also served on the editorial board of the *Review of Scientific Instruments.*