

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.

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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 post-doctoral 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 fur-

ther 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*.