

Miscellany

Manpower and Education

A survey of the needs for scientific and engineering manpower in private atomic energy industries is being conducted by the Atomic Industrial Forum, Inc., New York, under contract to the Atomic Energy Commission. The survey will cover current manpower supply and prospective needs in relation to the industry's privately supported atomic energy activities, as distinguished from work done under government contract. Information will be sought from all firms known to be engaged in or planning atomic energy work. The survey's purpose is to develop direct, reliable information for the use of industry, colleges and universities, and the government in planning and taking steps to relieve a critical shortage of atomic scientists and engineers.

The Forum survey will be the first step in a four-part manpower study based on the principle that the rate of advancement of nuclear science and engineering in the United States depends on the availability, now and in coming years, of an adequate number of persons trained in engineering and in the physical, mathematical, and natural sciences. Other surveys will cover the manpower needs of: (1) industry in carrying out work under contract to the Commission; (2) universities and colleges and nonprofit research institutions for their research and training programs; and (3) the government's requirements for direct employment of atomic scientists and engineers.

Firms included in the survey will be asked to report on the number, educational level, and specialized experience of professional employees engaged in: research and development; design and engineering; construction; operations, production, and manufacturing; and management and administration in ten principal fields of atomic energy. These are research reactors and allied facilities, power reactors, propulsion clear fuels, radiation laboratory equipment and facilities, instrumentation, particle accelerators, and by-product (isotope) applications.

An expanded graduate program emphasizing science and technology, and calling for an increase in both faculty and facilities, is to be developed over a period of years at the University of California's La Jolla campus, the site of Scripps Institution of Oceanography. Recent action has been taken by the Board of Regents to augment the University's broad program in the sciences by an expansion at La Jolla "along the lines of natural growth in mathematics, physics, chemistry, and

the earth and biological sciences". It is planned that undergraduate instruction at La Jolla will be geared to the needs of the graduate program. General Dynamics Corporation, three of whose Divisions are quartered in the San Diego area, has announced that it has made a grant of \$1 million to the University of California to assist in the expansion of the graduate science and technology program at La Jolla. General Dynamics President J. J. Hopkins and University President R. G. Sproul, emphasizing the "essential interdependence of modern American industry and universities", expressed the hope that the action would "set a trend for future university-industry relationships, resulting in a definite step toward solving the scientific manpower shortage".

The Creole Petroleum Corp. of New York City has announced that it will establish a Foundation "to support and encourage cultural, educational, and scientific activities in Venezuela". A basic purpose of the Foundation will be to help stimulate a greater exchange of ideas and persons (particularly teachers and graduate students) between the US and Venezuela. Thus, while the primary focus of the Foundation will be directed toward the support of Venezuelan education, many of its programs will involve related activities in the United States.

Fellowships and Awards

The Atomic Energy Commission has established a program of special one-year fellowships in nuclear energy technology. The fellowships, to be administered by the Oak Ridge Institute of Nuclear Studies, are open to students with the bachelor's degree in physics, engineering, chemistry, or mathematics, who have completed a course in ordinary differential equations. Applicants must be US citizens and be granted fellowship clearance by the AEC. The applicant must also be accepted as a candidate for the master's degree by one of a selected number of institutions listed by the AEC with the application forms. Fellowships carry basic stipends of \$1800 (additional allowances for dependents), tuition, and fees. Applications may be obtained from the Fellowship Office, Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tenn. and must be returned to ORINS not later than February 15, 1957.

An engineering curriculum of graduate study and fundamental research in plastics leading to the MS degree is being offered by Princeton University under its Graduate Plastics Program. Fellowship stipends ranging from \$1500 to \$2100 plus tuition and fees are available. Opportunities for employment as half-time research assistants at \$1800 per academic year are also available to students not on fellowships. Applicants must hold a bachelor's degree in engineering or physical science from a recognized institution and must meet general admission requirements of Princeton's Graduate School. Further information may be obtained by writing to: Louis F. Rahm, Director, Plastics Laboratory, 30 Charlton Street, Princeton, N. J.



Can you help add to these achievements?

These accomplishments in pure and applied science are widely known. To this impressive list, scientists and engineers at the Laboratory's Livermore site are making equally important contributions in the fields of nuclear weapons design, nuclear rocket propulsion, controlled thermonuclear energy (Project Sherwood) and high current accelerators.

What you can do to help add to these accomplishments is limited only by yourself—your *ability* and your *interest*.

For the University of California Radiation Laboratory is managed and directed by outstanding scientists and engineers.

These men are your "team-mates"... offering pioneering knowledge of the nuclear field and the newest, most expansive laboratory facilities. Here—where new ideas and techniques are traditional—initiative is constantly encouraged and developed.

IF YOU are a **MECHANICAL** or **ELECTRONICS ENGINEER**, you may be involved in a project in any one of many interesting fields, as a basic member of the task force assigned each research problem. Your major contribution will be to design and test the necessary equipment, which calls for skill at improvising and the requisite imaginativeness to solve a broad scope of consistently unfamiliar and novel problems.

If you are a **CHEMIST** or **CHEMICAL ENGINEER**, you will work on investigations in radiochemistry, physical and inorganic chemistry and analytical chemistry. The chemical engineer is particularly concerned with the problems of nuclear rocket propulsion, weapons and reactors.

If you are a **PHYSICIST** or **MATHEMATICIAN** you may be involved in such fields of theoretical and experimental physics as weapons design, nuclear rockets, nuclear emulsions, scientific

photography (including work in the new field of shock hydrodynamics), reaction history, critical assembly, nuclear physics, high current linear accelerator research, and the controlled release of thermonuclear energy.

In addition, you will be encouraged to explore fundamental problems of your own choosing and to publish your



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Producers of Scorpion F-89 Interceptors and Snark SM-62 Intercontinental Missiles

Two graduate fellowships and several assistantships in meteorology and oceanography for the academic year 1957-58 are available at the New York University College of Engineering. Candidates must have had mathematics courses through differential equations and at least 12 hours of physics. Applications are obtainable from: Assistant Dean in Charge of the Graduate Division, New York University College of Engineering, New York 53, N. Y. and must be returned before April 1, 1957.

Radio Corporation of America has announced the awarding of seven graduate fellowships and twenty-four scholarships in the sciences and engineering. Nearly half of the awards granted are for study in physics. Each fellowship has an approximate value of \$3500 and each scholarship provides a grant of \$800. Under a new provision of RCA's aid-to-education program, an unrestricted contribution of \$500 will be made to schools maintaining the RCA scholarships.

Texas A & M College is offering fellowships and research assistantships in oceanography and meteorology to qualified graduates in physics, chemistry, geology, meteorology, biology, and engineering for 1957-58. Student assistantships are also available for undergraduates working toward the BS in meteorology. Applications should be submitted by March 30, 1957. Further information and application forms may be obtained from the Department of Oceanography and Meteorology, the A & M College of Texas, College Station, Texas.

The Gravity Research Foundation is again offering awards (ranging from \$100 to \$1000) for the best 1500 word essays on "the possibilities of discovering: (a) some partial insulator, reflector, or absorber of gravity, or (b) some alloy, or other substance, the atoms of which can be agitated or rearranged by gravity to throw off heat, or (c) some other reasonable method of harnessing, controlling, or neutralizing gravity". Entries should be received no later than April 15, 1957. For further information write to: Gravity Research Foundation, New Boston, N. H.

Placement Register

The American Institute of Physics will conduct a Placement Service Register (Hotel New Yorker, January 30 through February 2) at the time of the meetings of the American Physical Society and the American Association of Physics Teachers in New York City. In view of the interest shown by so many employers and registrants at last year's AIP anniversary meeting, the Institute has again secured the fifth and sixth floors at the Hotel New Yorker for use of the Placement Register. This year, for the first time, the Register will be open until 9 p.m., Wednesday, Thursday, and Friday evenings. The primary purpose of the Register is to arrange interviews between the applicant and the recruiter. Although advanced registration is always pref-