

porting directly to the General Manager. We've been searching long and hard to find the right man from industry to head that office, and have finally succeeded. This means that there will now be one particular point of contact where there will reside positive responsibility to foster wider industrial participation in the Commission's program and the development, as may be possible, of a more normal competitive approach to segments of our business."

On May 1, the AEC announced that William L. Davidson, formerly director of physical research for the B. F. Goodrich Company, Akron, Ohio, had been named to head the Commission's new Office of Industrial Development. Dr. Davidson spent six years with Goodrich as a research physicist, working on various problems associated with rubber; he also carried out studies in X-ray and electron diffraction and worked on the development of radioactive tracer techniques. He is a member of the American Physical Society.

Private Nuclear Research

Walter Kidde Laboratories Established

Heralded as the "first privately-financed laboratory dedicated to research in nuclear power", the newly created Walter Kidde Nuclear Laboratories, Inc. has announced that it will perform research, development, and experimentation in the field of nuclear energy with services to be available to other organizations interested in the design of nuclear power plants or in applications of nuclear technology to their products and processes. A subsidiary of Walter Kidde & Company, Inc., manufacturers of fire protection systems and pneumatic devices for aircraft and marine application, the new organization was established in mid-April and expects to begin construction shortly of laboratory research facilities on Long Island.

Technical activities will be under the direction of Karl Cohen, former director of the atomic energy division of the H. K. Ferguson Company and a scientist with the wartime Manhattan District. The organization has an initial staff of thirty scientists and engineers and has announced plans to expand this group to one hundred during the next year or two.

AEC's Safety Record

1951 Figures Show Great Improvement

The nation's atomic energy program was operated during 1951 with an average of 3.67 employees injured for each million man-hours worked, a 21.2 percent improvement over 1950, according to the Atomic Energy Commission. The rate for all U. S. industry for 1950, the latest available from the National Safety Council, was 9.30. Operations contractors in the atomic energy program during 1951 sustained employee-injuries at a rate of 2.65 per million man-hours, 19.9 percent below their 1950 rate. The National Safety Council 1950 rate for the chemical industry, the nearest comparable, was 5.82. It is notable that the General Electric Company,

operating the Hanford Production Plant, headed a list of larger industrial contractors by cutting its injury rates 76 percent under its rates for 1950. General Electric production employees of Hanford, located at Richland, Washington, suffered only one injury for every five and one-third million man-hours of work in 1951.

Atomic Energy Commission direct employees were injured at a rate of 1.86 per million man-hours, compared with 2.05 in 1950. The preliminary injury rate for all federal civilian employees, calculated for 1951 by the Bureau of Employees Compensation, Department of Labor, was 8.0. Important contributors to the personnel safety record of the atomic energy program are thirty-two contractors and four AEC field offices who have worked without disabling a single employee in 1950 and 1951.

Isotopes

AEC Releases Distribution Summary

More than six hundred universities, research laboratories, and hospitals in forty-six states are using isotopes produced by the Atomic Energy Commission for scientific, medical, biological, industrial, and agricultural research and for medical diagnosis and treatment, the Commission stated in a report published in May. The full report on isotope distribution for five years shows that more than 18,900 shipments of radioactive isotopes and 1500 stable isotopes have been made to users in the United States and that 1100 radioactive isotope shipments have been made to users outside the United States. The report, *Isotopes—A Five-Year Summary of U. S. Distribution*, is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for one dollar per copy. A summary of isotope applications considered to be of significance to industry has been compiled from the *Summary* and printed separately as document TID-5078, which is available at the Office of Technical Services, Department of Commerce, Washington 25, D. C. for 30 cents per copy.

Radio Astronomy in Britain

Giant Radio Telescope to be Built

The drawing on the next page is an artist's conception of a proposed new radio telescope which is intended to occupy a site at Jodrell Bank, Cheshire, England. Costing the equivalent of \$940,800, the instrument will be constructed for Manchester University with financial support from the Nuffield Foundation and the British government. When completed, it will be the world's largest radio telescope with a paraboloid aerial 250 feet in diameter and with a height of 185 feet to the top of the horizontal axis.

One of the problems that has confronted radio astronomers in their use of radio equipment to detect electromagnetic waves generated by the sun and the stars has been to distinguish between the radiation emitted by the sun or some other specific source in the

galaxy and the general background radiation of the galaxy. A large aerial such as that being constructed at Manchester may be expected to give better information concerning the contribution from a specific source of galactic radio waves relative to the general background than has been possible with other radio telescopes now in use. This seems even more likely since provision has been made for rotating the aerial so that a source may be kept under constant observation for a considerable period of time.

The overcast state of British skies, which is an inhibiting factor in observing astronomical events with ordinary optical telescopes, may be said to have played a large part in the spectacular development of radio astronomy in Great Britain during the past several years. Until recently astronomers had been limited to observing events by means of the visual and near visual wavelengths of the electromagnetic spectrum. The only other significant band of the spectrum not ruled out for such observations by the opaqueness of the earth's atmosphere is the radio wave region covering wavelengths from approximately one centimeter to twenty meters, a considerably wider band than that of the visual wavelengths.

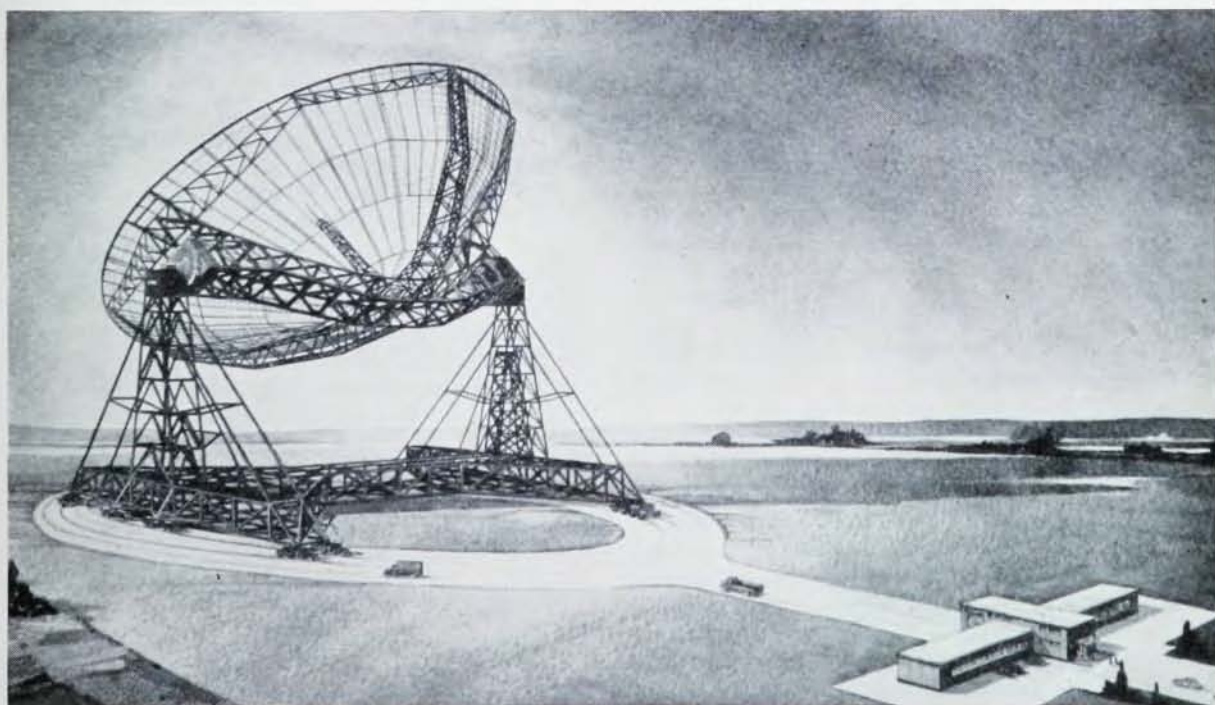
The particular importance of radio astronomy lies in the fact that there are regions of great astronomical interest which cannot be seen by means of conventional telescopes but which may be observed with the help of radio waves. The atmospheres of the sun and stars, consisting largely of low density, ionized gases, are ordinarily transparent to light waves but may reflect,

absorb, or emit radio waves, and one of the more intriguing problems in modern astronomy concerns the great difference in apparent intensity of radiation from the Milky Way depending upon whether observations are made visually or by means of radio waves. Visible sunlight is far brighter than starlight, but radio studies have indicated that the radiation from the Milky Way is usually far greater than that from the sun. The discovery during the past several years of a number of apparently discrete sources of intense radiation at various points in the galaxy has raised a series of questions concerning their origin which have never been conclusively answered. Although it has not been possible to identify these sources with outstanding visual stars, it has been suggested that some may in fact be stars having atmospheres of high temperature and on the whole having an entirely different character from the sun. Other sources, it is suspected, may be associated with various nebulae. The new radio telescope at Manchester, which will add materially to the facilities now available for mapping the galactic and solar radio noise, may give results that will do much to clear up the unresolved questions.

Materials Testing Reactor

In Operation at AEC's Idaho Site

The materials testing reactor, designed to produce a flow of intense neutron radiation, is now in operation at the National Reactor Testing Station, according to L. E. Johnston, manager of the Idaho Operations Office



Artist's conception of a mammoth radio telescope which is to be constructed for Manchester University in England. With a paraboloid aerial 250 feet in diameter, it will be the largest instrument of its kind in the world. *British Information Services*