is placed on the hygienic importance of transportation of food products and their distribution among the population. Methods of preserving foods are studied. Furthermore, in collaboration with the federal bureau of health, the uses of skim milk and potatoes, as additions to bread, have been investigated.

"The investigation of proposed reforms in nutrition constitutes a special field of research. The reform movement has offered to cooperate with the reichsarbeitsgemeinschaft. A standing committee has begun to perform practical work, and it appears likely that the objectionable features of the reform movement, as pointed out by men of science, will soon disappear. This committee, in collaboration with the federal ministry for popular education and enlightenment, will control the publicity service, which is suffering from mismanagement, and if attempts are made to oppose such development, action will be taken to eliminate all opposition.

"The second department, under the direction of Professor Schlayer, has the task of elaborating and establishing dietetic criteria for patients in the hospital and in the spas and health resorts. It is also the duty of this department to establish criteria for the selection and training of the personnel responsible for the nutrition of patients and convalescents.

"A special journal will publish results of the research of the reichsarbeitsgemeinschaft and the associated committees that have to do with the nutrition of the German people. A separate department will issue reports from time to time on the general nutrition of the people and will announce special diets to be used solely for patients and convalescents. The creation of a popular journal, whose essentials are now being worked out, has been announced by Professor Reiter (president of the federal bureau of health) for the fulfilment of this task."

## CONGRESS OF THE INTERNATIONAL SCIENTIFIC RADIO UNION

THE International Scientific Radio Union, according to the London *Times,* concluded a conference in London on September 19, when, at the closing session resolutions and plans for international research were adopted by the General Assembly. Professor E. V. Appleton, Wheatstone professor of physics at the University of London, was elected president of the union in succession to Professor A. E. Kennelly, of Harvard University. He will hold office until the end of the next congress, which is expected to take place abroad in 1936 or 1937.

The presidents of the five commissions into which the union is divided were elected as follows: (1) Radio-frequency standards, Dr. E. H. Rayner, of the British National Physical Laboratory; (2) Propagation of Waves, Dr. J. H. Dellinger, chief of the radio section of the U. S. Bureau of Standards; (3) Atmospherics, Professor E. V. Appleton; (4) Liaison with amateurs, Professor R. Mesny, France; (5) Radiophysics, Dr. B. van der Pol, Holland.

The success of the research planned at the Copenhagen meeting in 1931, in connection with work in Polar regions, and during the solar eclipse of 1932, which has permitted a definite decision to be made between competing theories, has led members of the union to organize a more extensive series of experiments of similar character.

The foreign delegates who have attended the congress have expressed themselves, according to the *Times,* as being very much impressed with the state of scientific radio research in Great Britain. In particular, the arrangements of the wireless services of the G.P.O. at Rugby have received special commendation because of the economic accommodation of so many antenna systems on so small a site.

Another subject on which continual work has been carried out since the Copenhagen meeting is that of the development of standards of radio frequency and the comparison of the national standards in different countries. The National Physical Laboratory and the British Broadcasting Corporation have cooperated in this service by generating oscillations of a very steady frequency at Teddington, and transmitting them over Europe by radio stations of the B.B.C.

Agreement on the value of the frequency ascribed to such standardizing emissions, which are usually made in the early hours of the morning, by national laboratories receiving them, has attained an accuracy of one part in 10,000,000. This achievement holds great promise for enabling new methods of physical research to be developed in addition to ensuring a high accuracy among the standards of different nations by which commercial frequencies are measured.

## OPENING OF THE NEW LILLY RESEARCH LABORATORIES

THE new Lilly Research Laboratories at Indianapolis were formally opened on October 11 in the presence of well-known investigators in the various branches of medicine. Eli Lilly, president of the company, was chairman at the formal exercises and J. K. Lilly, chairman of the board, addressed the assembly on "Research in Manufacturing Pharmacy." Dr. Irving Langmuir, associate director of the Research Laboratory of the General Electric Company, discussed "The Unpredictable Results of Research"; Sir Frederick Banting, of the University of Toronto, spoke on "The Early History of Insulin"; and Sir Henry Dale, chairman of the British National Institute for Medical Research, delivered an address en-

titled "Chemical Ideas in Medicine and Biology." Visitors later inspected the new laboratories.

In the evening a banquet was tendered the guests at the Indianapolis Athletic Club in honor of the distinguished visitors. Speakers on this occasion were Sir Henry Dale; Dr. Elliott P. Joslin, and Dr. George R. Minot, of Boston; Dr. Frank R. Lillie, of Chicago; Dr. Charles R. Stockard, of New York; Dr. George H. Whipple, of Rochester, New York; Dr. Carl Voegtlin, of Washington, D. C., and Dr. G. H. A. Clowes, director of the Lilly Research Laboratories.

While the research activities of Eli Lilly and Company are expected to center in the new laboratories, special research will be continued at the Lilly Biological Laboratories, near Greenfield, Indiana. A branch research laboratory is maintained also during the summer months in conjunction with the Marine Biological Laboratories at Woods Hole, Mass., and in addition special studies are carried on in cooperation with research groups in universities and clinics both in the United States and in foreign countries.

The new Lilly Research Laboratories comprise three stories and a basement. The main building is 220 feet long and 53 feet deep. The animal building, a separate unit attached to the main edifice, is four stories above ground and is air-conditioned throughout. The buildings are constructed of concrete, brick and Indiana limestone. Henry Hering, the American sculptor, designed the carvings that flank the front entrance—symbolic figures of Hygeia, the goddess of health, and Aesculapius, the father of medicine. On the first floor, there are a reception hall, a seminar room, administrative offices and laboratories equipped with the latest facilities for carrying on investigations in biochemical research.

The second floor houses the offices and laboratories of the organic research staff. There is an amphitheater for demonstrations of one kind and another. There are dark rooms and chill rooms and laboratories with small-scale production facilities. Laboratories for pharmacologic research are also on this floor.

The third floor is occupied by the biological research laboratories. On this floor, also, is the research library. The reading room is beautifully decorated, soft-light is assured through stained glass windows. The ceiling is arched, with bas-relief designs. The walls are of panelled oak. Small private rooms for investigators adjoin the library.

## RESEARCH ON THE ISOTOPES OF HYDROGEN

THE National Research Council through Dean Richtmyer and Dr. F. W. Willard suggested last spring that a committee be organized to aid research workers on the isotopes of hydrogen in the avoidance of duplication of research work in this field, if such duplication appeared to be undesirable to those research workers involved. The very rapid development of research work on this subject has resulted in many duplications which the research workers themselves would have been glad to avoid. This committee has been organized during the summer months and held its first meeting at Cleveland, Ohio, on Thursday, September 13.

The committee consists of Professor Harold C. Urey, Columbia University, *chairman;* Professor John R. Bates, University of Michigan; Dr. F. G. Brickwedde, U. S. Bureau of Standards; Professor G. H. Dieke, the Johns Hopkins University; Professor H. L. Johnston, Ohio State University; Professor E. O. Lawrence, University of California; Dr. Irving Langmuir, General Electric Company; Professor H. D. Smyth, Princeton University; Professor H. S. Taylor, Princeton University; Dr. M. A. Tuve, Carnegie Institution, and Dean F. C. Whitmore, Pennsylvania State College.

The meeting was attended by all members of the committee, with the exception of Dean Whitmore and Professor Lawrence, and in addition by the following, who took part in the discussion: Professor S. C. Lind, Dr. L. H. Reyerson and Professor George Glockler, of the University of Minnesota; Professor V. K. LaMer and Professor Mary L. Caldwell, of Columbia University.

The research programs of the institutions represented as they touched on work involving deuterium were discussed in considerable detail. For the most part very little overlapping of research programs was encountered. Those attending the meeting expressed the view that the meeting had been a very pleasant and profitable one, and hoped that similar meetings may be held in the future.

The discussions of the committee and the others who attended brought out certain salient points in regard to the duplication of research work in such a field. In the first place it may be very desirable that research work shall be duplicated. Again, research workers may have programs of research which they wish to carry through, regardless of whether others wish to work in the field or not. However, there may be cases in which people working on some problem would rather not duplicate each other's work, and it is the desire of the committee to aid in any way it can to avoid such duplication as this.

Professor Taylor moved, and the committee adopted the following resolution:

*Resolved,* that the National Research Committee on Hydrogen Isotopes shall act as a clearing house for researches in progress on deuterium until the spring