

interesting by-product may possibly be a study of these answers from the point of view of the psychologist.

The arrangements for the general public to see the eclipse are mainly based on the idea of general cooperation. During the period of totality, all external lights, particularly those in the streets and from automobiles, should be extinguished. In order to achieve this result and to avoid accidents it is hoped that all street traffic may stop within a minute after a signal given by bells, factory whistles or similar means some two or three minutes before totality. Here again cooperation from the readers of SCIENCE in helping to organize this by information and advice to the executives of their localities will be helpful. The position that this is done for the general benefit of the public should be stressed.

For those living near but outside the zone of totality, the usual means of transportation to within the zone by automobile, trolley or train will be available. Special services are being arranged in some cases and it is hoped that there may be similar opportunities offered to the general public by the transportation companies. It is generally advisable to invite the public *not* to come to observatory grounds at the time of the eclipse, silence and freedom from external disturbance of any kind being necessary for the observers to carry out their programs properly. Assistance for this may in some cases be secured by surrounding the grounds by students, boy scouts or members of similar organizations with, perhaps, the assistance of the public guardians of the peace.

It is suggested that in the limits of the zone of totality, such organizations may be utilized to define the limit by placing individuals fifty yards or so apart along a road which has a general north-south direction. As the possible error of the predicted line may be a mile either way, the line should extend to this distance on either side of the predicted limit, which may be obtained from the map published by the National Almanac Office referred to above. Exact positions of the predicted limits given in latitude and longitude have been computed by the office and will be furnished if desired by the writer.

Astronomers attached to observatories will doubtless be glad to give such assistance as lies in their power in carrying out these objects. The American Association for Variable Star Observers, amateurs whose excellent work is now furnishing valuable additions to our knowledge of the stars, has already started to give its assistance both through its general organization and through its individual members. Their widely scattered membership ensures cooperation in many places not easily taken care of otherwise.

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SCIENTIFIC EVENTS

OPENING OF THE RAMSAY MEMORIAL LABORATORY¹

PRINCE ARTHUR of Connaught, who is president of the University College Equipment and Endowment Fund Committee, on November 12 opened the Ramsay Laboratory of Chemical Engineering at University College. The laboratory, which, as its name implies, is to serve as one of the memorials to Sir William Ramsay, is the first of its kind established at the college. It has been fitted up in buildings next to the School of Tropical Medicine in Gordon Street, and there is access to it from the college grounds. After experience has been gained there, the erection of new and permanent buildings is contemplated.

The opening ceremony took place in the botanical theater of the college. Sir Robert Robertson, chairman of the chemical engineering sub-committee, presided. He said that there was a want in this country of men with the technical training of chemists who were capable of transferring a laboratory operation to a large scale. Dealing with the details of training, he referred to a practice existing in the United States of taking students to works, and urged chemical manufacturers in this country to consider whether they could not afford similar facilities.

Prince Arthur of Connaught, in declaring the laboratory open, said that ceremony was the final act in the provision of a worthy memorial to that great man of science, Sir William Ramsay, who for twenty-six years, from 1887 to 1913, held the chair of general and inorganic chemistry at that college, and who by his remarkable series of discoveries during that period earned for himself a place in the first rank of the world's scientific workers and brought honor and renown to the college with which he was connected. After his death in 1916 a large circle of friends and colleagues, not only in this country, but in all parts of the world, decided that a fitting memorial should be raised in connection with his wonderful contribution to chemical science. The appeal was not only of a national character, but of an international character, and met with a ready response from all parts of the British Empire and the world. The memorial had taken two main forms: (1) The foundation of Ramsay Memorial Fellowships in Chemical Science, and (2) the foundation of a Ramsay Laboratory of Chemical Engineering.

The success of the first half of the scheme was shown by the fact that at present the fellowship trusts were administering sixteen scholarships held by carefully selected Fellows from Great Britain, Canada, Denmark, Holland, France, Greece, Italy, Japan, Nor-

¹ From the *London Times*.

way, Spain, Sweden and Switzerland. Professor E. C. Williams, of the Universities of Manchester and Leeds, was appointed a year ago to the Ramsay chair of chemical engineering, and it was under his guidance that the laboratories had been reconstructed and equipped. The beginning of work had not been actually deferred until that day, but for some time had been actively in progress. He was gratified to learn that, apart from the support given to the movement by the Ramsay Memorial Fund, which handed over a sum of £26,979, the Laboratory of Chemical Engineering had enlisted the ready and generous support of many of the great firms of this country which were connected with the chemical industry. A sum of approximately £1,390 a year for five years had been provided in this way. Even now further financial support was needed if the department was to be enabled to rise to its full possibilities as the handmaid of the chemical industry of this country.

RECOMMENDATIONS FOR FEDERAL ADMINISTRATIVE REFORM BY AMERICAN ENGINEERS

MORE than 50,000 professional engineers, representing thirty national and local engineering societies, have entered a movement for Federal administrative reform, according to an announcement made by the Engineering Council, New York.

The project will be discussed at a national forum to be held in connection with a meeting of the council at Washington, D. C., January 16 and 17.

Architects, contractors and representatives of other professions and industries are allied with the engineers in their attempt to bring about a reorganization of the Interior Department, called an archaic survival of the early days of the republic.

The president of the council, ex-Governor James Hartness, of Vermont, made public a resolution adopted by the council's administrative board instructing the committee on government reorganization as it relates to engineering matters "to adopt a policy of aggressively working for the complete project of the Department of Public Works as originally outlined in the McCormick bill and finally developed in the Brown plan."

Many millions of dollars can be saved annually to the nation's taxpayers and economy and efficiency promoted by coordinating the immense public works functions of the government, historically a prolific source of waste, according to Mr. Hartness, who made the following statement:

The American Engineering Council will aggressively endeavor to have included in the proposed division of public works all the construction work now done by the Government, which means, in the light of the present

bill pending in Congress, that we shall endeavor to have included in that bill, by amendment or otherwise, work on rivers and harbors and by the Mississippi River Commission.

There will be a meeting of our committee on government reorganization as well as of the advisory council in Washington the evening of January 15 to develop concrete plans for carrying out the proposed changes.

Mr. Hartness also made public a second resolution referred to the administrative board which "deplored the failure of the committee on reorganization of government departments to recommend the transfer of rivers and harbors work from the Engineer Corps."

ROYAL INSTITUTION LECTURES

THE program before-Easter lecture arrangements at the Royal Institution of London has been issued. The subject of the Christmas course for young people is "Concerning the habits of insects," to be delivered by Mr. F. Balfour Browne, beginning on December 27, on "Insect collecting," followed by "The habits of bees and wasps" (December 30), "Caterpillars" (January 1), "The dragonfly" (January 3), "The water beetle" (January 6), and "The habits of insects and the work of man" (January 8).

The general course will begin on Tuesday afternoon, January 13, when Professor A. Fowler will give the first of two lectures on "The analysis of spectra"; on succeeding Tuesdays there will be two lectures by Dr. H. R. Hall on the "Prehistoric Greek and ancient Egyptian civilizations"; four by Professor Barcroft on "The color of the animal creation"; two by Professor E. N. da C. Andrade on "The evolution of the scientific instrument"; and two by Professor A. S. Eddington on "The internal constitution of the stars." On Thursday afternoons at the same hour, beginning on January 15, Mr. J. S. Huxley will give two lectures on "The courtship of animals and its biological bearings"; Sir William Bragg will deliver four on "The properties and structure of quartz"; Sir A. Smith Woodward two on "Dinosaurs"; Dr. Leonard Hill two on "The biological action of light"; and Mr. T. Thorne Baker two on "Chemical and physical effects of light."

The Saturday lectures will include four by Sir Ernest Rutherford on "Counting of the atoms"; and two by Professor J. H. Ashworth on a zoological subject to be announced later. The Friday evening meetings begin on January 16 with a discourse by Sir William Bragg on "The investigation of the properties of thin films by means of x-rays." Succeeding discourses will probably be given by Dr. A. W. Crossley, Professors J. W. Gregory, R. W. Chambers, T. H. Pear, Gilbert Murray, J. W. McBain, Principal Irvine, Mr. W. B. Hardy, Sir Ernest Rutherford, Sir Daniel Hall and others.