

### The Edinburgh Meeting of the British Association.

THE preliminary programme and invitation circular for the eighty-ninth annual meeting of the British Association, to be held in Edinburgh on September 7-14, is now ready for distribution. Members of the Association will receive it shortly if it has not already reached them; others who propose to attend the meeting may obtain a copy on application to the Assistant Secretary of the Association, Burlington House, London, W.1. The circular, which is more comprehensive than has been customary, contains more than a merely preliminary programme, for many of the definitive arrangements for the meeting are set forth and a time-table of the principal engagements is appended. The circular is a pamphlet of sixteen pages with a three-leaf cover. One leaf, detachable at a perforation, provides two reply forms—one for intimation of attendance and the other for intimation of the member's local address—and, in order to assist the organisation of the meeting, members who propose to be present are requested to complete and return these forms at their earliest convenience. On another cover is a useful map of central Edinburgh, on which are indicated the principal buildings, especially those to be used for the meetings, the railway stations, the 'bus and tram routes, and the principal hotels.

A prefatory note on Edinburgh is followed by the announcements regarding conditions of membership and railway communications. In the latter we note that the general officers of the Association have made, and will continue to make, every endeavour to secure a reduction of return fares for members attending the meeting, but up to the present they have been unable to obtain this concession from the railway authorities, and, failing the issue of a further intimation, it must be assumed that the concession formerly customary cannot be given this year. Enclosed in the circular is a printed slip directing attention to a proposal to run motor coaches from London (following routes *via* Oxford and Cambridge) and from Bristol, Liverpool, and other towns north of these, to convey members to Edinburgh, and back again if so desired. The fares would be approximately two-thirds of those charged by the railways in each case. The motor coaches would leave London and points south of Liverpool on September 5, completing the journey to Edinburgh in two days, and arrangements would be made for hotel accommodation *en route*. From Liverpool, Manchester, Leeds, and points north thereof the journey to Edinburgh would be made in one day—September 6. Passengers' luggage would be collected and delivered, each passenger being allowed 56 lb. free of charge. This enterprising project can be realised only

if the transport company has a guarantee as to the number of members who would be prepared to avail themselves of it, and members are therefore requested to state on their intimation forms if they would make use of the motor service.

The programme gives the titles of the addresses, discourses, and principal discussions. The presidential address by Sir Edward Thorpe will deal with some aspects and problems of post-war science pure and applied. The evening discourses are on subjects especially appropriate to a meeting in Edinburgh. Prof. C. E. Inglis will make a comparison of the Forth and Quebec bridges, showing the evolution of cantilever-bridge construction during the past thirty years; and Prof. W. A. Herdman will give an account of the important part played by Edinburgh in the progress and development of the science of oceanography.

The sectional presidents' addresses will cover a wide range of subjects; for example, the laboratory of the living organism, the boundaries of physiology, experimental geology, evolution, the theory of descent in relation to the early history of plants, the study of native races, consciousness and the unconscious, the place of music in a liberal education, water-power, the principles by which wages are determined, and agricultural economics. Several of these addresses are to be introductory to discussions. The president of the Conference of Delegates of Corresponding Societies is to give an address, followed by a discussion, on "Science and Citizenship." Arrangements have been made for a number of joint sectional discussions, and the following are announced as the respective subjects: The structure of molecules, the age of the earth, biochemistry, the proposed mid-Scotland canal, the origin of the Scottish people, and vocational training and tests. The times of the sectional presidential addresses and of the principal discussions have been arranged so that those on cognate subjects are not held at the same hour; for instance, the addresses are distributed over the Thursday, Friday, and Monday mornings, and not more than two are at the same hour.

From this summary it will be evident that the arrangements for the meeting are in an advanced stage, and we understand that this is also the case in regard to the programme of papers to be presented to the various sections.

The forthcoming meeting in Edinburgh—restored to its pre-war length of a full week—promises to be one of great scientific interest and value, and all well-wishers of the Association are looking forward to a full resumption of the activity and influence of the Association.

### The Royal Observatory, Greenwich.

THE visitation of the Royal Observatory took place on June 4, when the report of the Astronomer Royal, which covers the year ended on May 10, was presented. The report states that strenuous efforts are being made with the transit circle to complete the present catalogue, which embraces some two thousand stars of the list prepared by Dr. Backlund and Mr. Hough; the aim of that list was to obtain a convenient number of reference stars uniformly distributed over the sky. These observations will be concluded at the end of this year, after which observations will be commenced of all stars down to magnitude 8.0 between N. declination  $32^\circ$  and  $64^\circ$ . It will be remembered that stars down to magnitude 9.0

between declination  $64^\circ$  and  $90^\circ$ , and also between  $24^\circ$  and  $32^\circ$ , have recently been observed at Greenwich. The catalogue of the last-named region was distributed during 1920; it includes the determination of the proper motions of 12,000 stars.

The mean error of the longitude of the sun, as given in the Nautical Almanac, is  $-1\frac{1}{3}''$ ; that of the moon is  $-13''$ , which is deduced from observations on 114 nights. Eight occultations of stars by the moon were observed, and also both phases of the solar eclipse of April 8.

The 28-in. equatorial has undergone extensive repairs by Messrs. Cooke; observations of double stars have now been resumed. The working catalogue