NEWS AND VIEWS

The British Association: Science and World Order

FURTHER details of the meeting of the Division of the Social and International Relations of Science of the British Association to be held during September 26–28 at the Royal Institution (NATURE of August 30, p. 251) have now been issued. The aim of the meeting is to "demonstrate the common purpose of men of science in ensuring a post-war order in which the maximum benefits of science will be secured for all people".

Mr. Winant, the American Ambassador, and M. Maisky, the Soviet Ambassador, will preside at some sessions, and others will be held under the chairmanship of Dr. Wellington Koo (Chinese Ambassador). Dr. Beneš (president of Czechoslovakia), Mr. H. G. Wells, and Sir Richard Gregory (president of the British Association). Czechoslovakia, Poland, Norway, Holland, Belgium, and France will be represented, and exiled men of science from Germany, Austria, and possibly Italy, will also take part. The meeting will seek to define the part which science can play in helping to secure the best use of the possibilities of the twentieth century and to make practical contributions to problems and their possible solution.

Atmospheric Pollution

THE annual report for the year ending March 31, 1940, on the Investigation of Atmospheric Pollution, which would normally be issued by the Department of Scientific and Industrial Research, has been replaced by a summary prepared for the information of the co-operating bodies. From this it appears that the deposit over the whole of Great Britain, as represented by the deposit gauges, has decreased. The highest total deposit measured for the year (395 tons per square mile) was in Manchester, while the lowest measured (57 tons per square mile) was at Loggerheads, Shropshire; both places, however, show smaller deposits than in the previous year. There were only three complete sets of results with automatic filters: Cardiff, Coventry and Stoke-on-Trent. These are not sufficient to provide a basis for comparison with the previous year. The average monthly suspended impurity does, however, show interesting characteristics, notably maxima, in January 1940, which it will be remembered was unusually cold. This increase in suspended impurity was no doubt due to an increase in all forms of domestic heating during the cold period despite the shortage of fuel in some districts. All three places show a sharp increase in suspended impurity in October, followed by a minimum in November, although the average temperature for that month was lower than the average for the past fifty years or so. It may be that the continuation of Summer Time until November 20, 1939, and the restriction on the combustion of fuel imposed by the fuel rationing scheme may be responsible to some extent for these minima in November.

Complete results for the measurement of the concentration of sulphur dioxide by the volumetric method were obtained from the stations at London (Beckton and Crossness), Salford and Sheffield. The averages from these stations are slightly lower than those for the previous year. The measurement of sulphur gases by the lead peroxide method does not show any unusual features. Measurements of suspended impurity by the automatic filter made in Central Park, New York City, show that New York has its purest air in the afternoon between 1 and 3 p.m., while the measurements for British cities have invariably shown that the early morning air is the cleanest. This difference is no doubt due to the greater convectional turbulence of a continental climate in the day-time, resulting in a distribution of the pollution through a greater depth of atmosphere and a corresponding reduction of concentration at ground-level. Further measurements made in Dublin by Dr. Leonard have shown an interesting correspondence between concentration of sulphur dioxide and suspended impurity, the two curves for the average monthly values showing a noticeable degree of parallelism. Automatic filter results at Leinster Lawn, Dublin, indicate a ratio of domestic to industrial pollution of 3·3 to 1 in winter and 2·3 to 1 in summer.

Luminous Plastics

IN a paper by Dr. V. E. Yarsley published in the *Electrician* of August 8, an interesting account is given of recent developments in moulding materials for practical purposes. Perhaps the application to luminous plastics is the one which has attracted the greatest public interest. Having a light switch, door handle or telephone clearly visible is of real practical value for a night emergency in war-time. The layman usually associates luminescence with phosphorus or radium, and the terms luminescence, fluorescence and phosphorescence are often misused. Those substances which convert incident radiations into visible light, and not into heat, as is more usual, are called luminescent. Those materials which emit visible radiations only during the period when the exciting radiation is impinging are said to be fluorescent. The commercial luminescent materials do not belong to the radium family. They are usually metallic sulphides, more particularly those of zinc, calcium, strontium and barium. Mixtures may be used, and in some cases increased luminosity results from the addition of minute quantities of metals.

Luminous plastics may be produced either by adding the luminous pigment directly to the moulding powder or by covering the moulded article with a suitable luminous lacquer. While the latter appears the more natural method, since it requires the relatively expensive luminous pigment only in the lacquer layer, yet there are certain advantages