

Colonial student-nurses are taking general nursing, mental nursing or midwifery courses in the United Kingdom.

A chapter on international relations, besides giving a picture of the extent of technical co-operation both through the Specialized Agencies of the United Nations and in other ways, gives a clear account of Great Britain's relations with the Trusteeship Council and of the reasons which led the United Kingdom to oppose two, and abstain from five, resolutions in the

discussion by the Fourth Committee of the General Assembly of the report of the Committee on Information from Non-Self-Governing Territories. This is but a single illustration of the way in which this survey of Colonial territories is an invaluable contribution to the discussion of Colonial affairs in general or to the consideration of Colonial development and welfare schemes, and it forms a very useful guide to the scientific and technical work which is reported more fully elsewhere.

## NEWS and VIEWS

### Faraday Society: Prof. J. W. McBain, F.R.S.

THE Faraday Society has elected Prof. John William McBain an honorary life member. Prof. McBain has held the chairs of physical chemistry in the Universities of Bristol in Great Britain and Stanford in the United States, and after his retirement from Stanford was for a time director of the National Chemical Laboratory of India. Prof. McBain's contributions to colloid science and surface chemistry are well known; he was the first to undertake a comprehensive study of the constitution of soap solutions, and is universally recognized as the discoverer of the ionic micelle and a pioneer of the science of colloidal electrolytes. In this work he has been ably assisted by his wife, Mrs. M. E. Laing McBain. His experimental verification of Gibbs's adsorption equation, by slicing off a very thin layer from the surface of a solution, and comparing the concentration of solute in this layer with that in the bulk solution, stands out as one of the boldest experimental researches in physical chemistry of the last quarter of a century. He was awarded the Davy Medal of the Royal Society in 1939.

### A Meteor Train

DR. A. R. HOGG, chief assistant at the Commonwealth Observatory, Mount Stromlo, Canberra, writes that a spectacular meteor train was seen during the course of photometric observations at the Commonwealth Observatory. The train first appeared on May 4 at 19h. 15m. G.M.T. (05h. 15m. E.S.T.) against a dark sky. For a few seconds it had the likeness of a comet's tail, about  $5^\circ$  long. This similarity soon vanished and within thirty seconds of formation the train was a straight line. In a further half-minute the top third of the line apparently bent northwards a distance of about  $2^\circ$ . Subsequent changes were more gradual. Fifteen minutes after formation the train was visible as a faint diffuse horse-shoe-shaped glow centred  $2$  or  $3^\circ$  higher than the original train. Thirty minutes after the formation the area was searched with a wide-field telescope of 5-in. aperture, but no trace of the train could be seen. The angular dimensions were estimated from sketches made at the time, and reference to the background of identified stars. This gave the position of the centre of the train as near R.A. 14h. 40m. and Dec.  $37^\circ$  S. (1950). If it be assumed the meteor first appeared at the average height of such objects (100 km.), the train was about 20 km. long and distant 140 km. from the observer on a true bearing of  $245^\circ$ . At this point it would not have been illuminated by direct sunlight. The distortion of the train in the first half-minute represented a component of motion at the 80–100 km. level of at least 480 km./hr.

moving to the north. From the date of appearance and direction of the train the meteor could have been a member of the Gamma Aquarii shower.

### Scintillation of Stars and the Atmosphere

A RECENT issue of the *Irish Astronomical Journal* (1, No. 8; December 1951) contains, among others, a paper on "Scintillation and Atmospheric Seeing", by H. E. Butler, of Dunsink Observatory, which gives an excellent account of the reasons for this phenomenon. The study by means of a photoelectric cell of the most rapid fluctuations present in the light from a star has been carried out at Dunsink. The equipment will record fluctuations in the light intensity at frequencies between 0 and more than 1,000 c./s., and very interesting results are shown graphically on a plate. Besides its astronomical applications, there is also the meteorological significance, because the amount of scintillation at any moment could be a measure of the amount of turbulence that is present at the time in the telescope beam. It has already been shown that considerable changes in the scintillation can occur with changing weather.

### Research on the Constitution of Alloys

THE Constitution of Alloys Group of the British Iron and Steel Research Association has recently issued a statement dealing with the principal gaps in current research on alloys constitution and indicating its willingness to encourage and assist such research. The alloys that have been insufficiently studied are as follows: high-temperature materials, and, in particular, higher-melting-point alloys of Groups V and VI, systems containing borides, and ferrous alloys containing silicides; ferrous alloys in general, and, in particular, the binary alloys of iron as a basis for further studies of the complex equilibria involved in ternary and quaternary alloys, and also the relationship between the various carbides in alloy steels; magnesium alloys, their heat treatment, and especially the ternary and more complex alloys; high-tensile brass-type materials and the complex bronzes; and finally, general work on the physics of alloys, especially the crystal structures of intermetallic phases and accurate measurement of lattice spacings. It should be noted that by enumerating this list of topics no implication is intended that other subjects and systems in metallurgical research are of lesser interest or do not merit so much study. The Group would also be glad to know of existing equilibrium diagram work which has not been reported to it, and of projected research programmes involving the constitution of alloys. Those interested should communicate with the Secretary, Constitution of Alloys Group, British Iron and Steel Research Association, 11 Park Lane, London, W.1.