SCIENTIFIC EVENTS

EXHIBITS AT THE CONVERSAZIONE OF THE ROYAL SOCIETY

THE first of the two *conversaziones* given annually by the Royal Society was held at Burlington House, London, on May 14.

The exhibits included, according to the London *Times*, one by Professor Gerald Stoney and Mr. J. P. Chittenden, showing the vibration of steam turbine discs and shafts. In one model, a multi-loaded shaft was rotated up to 4,600 revolutions a minute or more. In the same room the Anglo-Persian Oil Company showed an experimental apparatus used in investigating the protection of oil tanks from lightning. In an adjoining room the National Physical Laboratory had two exhibits—one a mercury-vapor pump, designed to combine the jet and condensation principles in one unit and able to produce a vacuum of 0.00001 mm of mercury or less when working against a back pressure of 1 mm; and the other a method of measuring natural lighting in rooms. In a third exhibit from the laboratory, an electrical method of hardening the ends of standard gauges was demonstrated.

Among other physical exhibits, Professor E. N. da C. Andrade and Mr. J. W. Lewis had an apparatus for showing the vortex motion of viscous liquids between two rotating cylinders; the Cambridge Instrument Company sent a torsionmeter in which an ammeter gives a direct reading of the mean torque over a 4 ft. length of shaft of any diameter; a new type of isothermal calorimeter came from the Explosive Branch, Research Department, Woolwich; and apparatus sent by Professor W. A. Bone included a nickel-steel bomb capable of withstanding pressures up to 1,000 atmospheres suddenly developed in gaseous explosions. There were two applications of the neon lamp—one a device for measuring peak voltage, shown by Professor J. T. MacGregor-Morris and Mr. L. E. Ryall, and the other, a method, developed by the International Western Electric Company, of producing an even time-scale for the inspection of wave-forms with the cathode-ray oscillograph. A recently discovered wax portrait of Joseph Priestley, in high relief and colored as in life, and also the original pocket-sundial of the Earl of Orrery, were exhibited by Mr. George H. Gabb.

The biological exhibits were unusually numerous, among the contributors being the Departments of Zoology of the British Museum and the Imperial College of Science and the Royal College of Surgeons. A method permitting cell division to be studied in the living tissue was shown by Mr. T. S. P. Strangeways, and Mr. B. K. Das illustrated the development in certain Indian fishes of accessory breathing organs in addition to the gills. Living specimens of plants from Rothamsted Experimental Station showed the effects of absence of boron on the growth of various species. In some cases the presence of this element in very minute quantities appears to be essential for perfect development, though an excess is harmful. Cultures of fungi that cause dry rot in buildings were shown by Professor Percy Groom. Sir Almroth Wright, with Mr. A. Fleming and Dr. Colebrook, demonstrated methods for the exploration of bacterial disease.

A GEOLOGICAL FIELD TRIP

THE members of the department of geology of the Mississippi Agricultural and Mechanical College have under serious consideration the repeating of the department's summer field trip in automobiles. Instead of an Appalachian trip, as of the last two summers, the one contemplated this year is to the Pacific Coast by a southern route, thence north through California, Oregon and Washington, and home by a northern route.

The trip of last summer was more extensive than the one of the previous season. It covered approximately 5,000 miles and included a study of 22 states, the District of Columbia and the Dominion of Canada. The whole of the Piedmont belt, from Montgomery to New York City, was traversed, the New England highlands and coast to York Harbor in Maine, the White and Green Mountains of New Hampshire and Vermont, the drumlins of Central New York, the Pleistocene lake shores to Niagara Falls and Cleveland, the glacial till plains to Columbus, Indianapolis and Vandalia, and the Mississippi embayment of the Gulf Coastal Plains from Cairo to A. and M. College. Many kinds of metallic and non-metallic minerals of economic value were studied as they were being produced; as, for example, the coal, iron and flux of the Birmingham district; the bauxite and fuller's earth of Central Georgia; the barite, yellow ochre, manganese, brown iron ore and marble of the Atlanta environs; the clay products of Baltimore; the anthracite of eastern Pennsylvania; the zinc and other ores of Franklin Furnace, New Jersey; the granites of Quincy, Massachusetts; the quartzites of Vermont; the rock salt of New York, etc. Exhibits of minerals, rocks, fossils and the like were examined at many places but more particularly at the museums at Tuscaloosa, Atlanta, Richmond, the National, the University of Pennsylvania, the American, at Harvard, Albany and Ohio State University.

Not all geologic but none the less interesting and profitable were the many "side issues." They consisted of visits to 26 institutions of higher learning, southern, eastern, New England and central states—