

JOINT MEETING OF LEARNED AND TECHNICAL SOCIETIES IN CORNWALL.

THE recent meeting—the outcome of the happy suggestion of a number of representative Cornishmen more than a year ago—furnished an opportunity such as has never before occurred, for the members of council and officers of our principal scientific and technical societies to meet each other, while at the same time making acquaintance with the mining and engineering industries of what is one of the oldest mining districts in the world, and probably the premier district as regards record of continuous working. Visits to typical tin-mines, china-clay pits, and engineering works formed part of the programme, including a trip to the uranium mines from which the British Radium Corporation obtains its supplies of pitchblende.

One of the most interesting features was a visit to the King Edward Mine, a real working mine which produces and sells "black-tin," and, as part of the Cornwall School of Metalliferous Mining, is worked entirely for, and largely by, students. The success which this, the only mine in the world which is worked on such lines, has achieved in the promotion of technical education has led to the suggestion for an amalgamation of the Cornwall schools with the Imperial College of Science and Technology.

The excellent work of the Royal School of Mines (now one of the units forming the Imperial College) is seriously handicapped by the lack of a practical training ground for the study of mining, ore-dressing, and mineral valuation, &c., and arrangements might possibly be made by which certain of the Royal College of Science students in geology, mineralogy, and technical mineral chemistry could also spend a portion of their time in a district where commercial requirements are paramount, where conditions for practical working are ideal, and where technical education may be said to have been born in 1833, when the Royal Cornwall Polytechnic Society was founded. The roll of this institution, together with those of the other two Cornish societies, includes some of the most celebrated names in connection with science and engineering, and the records of the men whom Cornwall has furnished and is still furnishing afford ample justification for an amalgamation useful and honourable to them and to others having more funds but fewer facilities for completing their curriculum.

THE METEOROLOGICAL OFFICE AND ITS OBSERVATORIES.

THE year 1910 will be memorable in the history of the Meteorological Office, not only because it witnessed the removal of the office to South Kensington, but also because in the same year the Meteorological Committee took formal charge of the observatories at Kew and Eskdalemuir, and provision was thus made for the natural coordination of meteorology with the geophysical sciences of terrestrial magnetism and seismology.

The premises in Victoria Street, Westminster, which had been the home of the Meteorological Office for more than forty years, had been designed as residential flats, and had no facilities for observation or experiment. The only observatory under the direct control of the office was situate in the south-west of Ireland, two days' journey from London, and thus any experiments with regard to instruments or special observations that were required had to be carried out by arrangement with some other authority.

In preparing the plans for the new building at South Kensington the needs of the office in this

respect were kept in view, and amongst other provisions a large flat roof was arranged for, conveniently accessible from the other parts of the building, and with a small laboratory, photographic room and workshop in direct communication.

Immediately the new building was occupied Dr. Shaw organised a corps of observers and set on foot a regular system of meteorological observations. At present there are installed on the roof an anemometer, thermograph, and solar radiation recorder, each with its recording parts conveniently arranged for public inspection. In addition there is a self-recording rain gauge, a wind-direction recorder, and a sunshine recorder. Within the building are barographs of the ordinary pattern, and a microbarograph recording minor fluctuations of pressure. By the courtesy of the trustees of the British Museum it has been possible to arrange, in addition, a meteorological station in the grounds of the Natural History Department.

An interesting development in cloud photography has been made possible by the cooperation of Mr. John Tennant, and simultaneous photographs of the same cloud being taken on the roof of the office and at Mr. Tennant's house, about a mile distant, the pictures are afterwards combined to form stereoscopic slides.

While these arrangements indicate a considerable advance, there has been a no less marked advance as regards the associated observatories. For more than forty years the Meteorological Office had maintained an observatory at Valencia, co. Kerry, and by means of annual subsidies it had secured continuous meteorological records at a number of other observatories in the British Islands. Results from all these institutions have been collected by the office, and for the twelve years, 1869-1881, reproductions of the daily curves, on a reduced scale, have been published in *The Quarterly Weather Report*. The whole series of original records form probably a unique register of the atmospheric phenomena of any country.

In 1910, as already stated, an arrangement was entered into between the Royal Society, the National Physical Laboratory, and the Meteorological Committee, and with the sanction of H.M. Treasury, under which the Meteorological Office took over the observatories, both at Kew and at Eskdalemuir, and is now therefore directly responsible for the control of three observatories, situated respectively in the south-east of England, the south-west of Scotland, and the south-west of Ireland.

Of the three observatories, that at Valencia, which has been longest under the control of the office, was at first and for many years a purely meteorological observatory, but observations of the magnetic elements were added in 1900 at the request of a committee of Irish physicists, of whom the late Earl of Rosse was one of the most active members.

Of the other observatories, that at Kew is the oldest. The building was erected by King George III. in 1769, and it was in regular use as an astronomical observatory and physical museum from that year until 1841, when it passed into the hands of the British Association, in the care of which it remained for the next thirty years.

In 1871 the British Association withdrew its support, and the responsibility for the observatory passed to the Royal Society, when Mr. J. P. Gassiot generously presented securities representing 10,000*l.* as a fund to secure the "maintenance of a central magnetical and meteorological observatory at Kew."

Notice of this gift was received by the Royal Society in March, 1871, and in June of the same year a deed expressing the donor's wishes was sealed and a committee was appointed to administer the trust. The