

Applied Physics at the New South Wales University of Technology: Mr. N. F. Astbury

ANOTHER chair of the newly founded New South Wales University of Technology (see *Nature*, August 13, p. 287) has been filled by the appointment of Mr. N. F. Astbury to be professor of applied physics. On leaving the University of Cambridge, Mr. Astbury joined the staff of the National Physical Laboratory and became responsible for much of the work on primary and secondary electrical standards, including the re-establishment of the primary inductance standard and a redetermination of the ohm with Hartshorn. During the War he worked on problems of harbour defence and electro-acoustics in the Royal Naval Scientific Service, and in 1945 joined Joseph Sankey and Sons to organise a research laboratory. This became the central laboratory of the Guest, Keen and Nettlefold group of companies, and Mr. Astbury is at present the director there. He has taken part in work on the processing and properties of electrical sheet-steel and has expanded the organisation to deal with a wide range of problems in applied physics.

Pacific Ocean Earthquake of August 21

A VIOLENT Pacific Ocean earthquake, late on August 21 near the coast of British Columbia, was the occasion for a very successful operation of the Hawaiian seismic sea-wave warning service developed by the U.S. Coast and Geodetic Survey. Upon the arrival of the earthquake waves, automatic alarms connected with seismographs sounded at the Survey's observatories at Honolulu, Hawaii; Tucson, Arizona; and Fairbanks, Alaska. The observers at all of these stations immediately attended their instruments, developed records and made readings. Tucson and Fairbanks promptly communicated theirs to the central station at Honolulu. Based upon these reports, the observer at Honolulu determined an almost exactly correct epicentre location and issued preliminary advisory warnings to military and public authorities at Honolulu in about one hour and a half after the time of the earthquake. This warning preceded the estimated arrival time of a seismic sea-wave, which might have resulted from this earthquake, by about four hours. Subsequent inquiries and messages to tide stations in Alaska showed that a small seismic sea-wave was produced; however, no such wave reached Hawaii in damaging proportions. The earthquake, though little publicized, was actually of greater magnitude than the disastrous recent earthquake of Ecuador, South America.

The development of this warning system grew out of the disastrous seismic sea-wave of April 1, 1946, when 173 persons died and damage amounting to 25,000,000 dollars was done in Hawaii. It has involved the development of visible-recording seismographs equipped with automatic earthquake alarms, and arrangement with a number of co-operating tide observers on Pacific islands or shores prepared to report seismic sea-wave information upon inquiry or in case such a wave is noted. Some of the tide stations are equipped also with a unique seismic sea-wave alarm device developed by the Survey. This is 'tuned' to respond to these characteristic waves of 10-25 min. period. Also involved was the development of high-priority communications facilities between the various points involved. The co-operation of the military services of the United States has been invaluable in the latter connexion.

Mathematical Colloquium in Manchester

A MATHEMATICAL colloquium was held in the University of Manchester during September 8-10. It was attended by more than a hundred members from most of the British universities and university colleges. The discussion sessions which occupied the greater part of the three days were devoted to analysis (two sessions), algebraic geometry, algebra, differential geometry and topology. They took the form of a short review of recent progress, followed by a general discussion. Lectures were given by Prof. H. R. Pitt (Belfast), on "Fourier Transforms", by Mr. P. Hall (Cambridge), on "The Basic Concepts of Abstract Algebra", and by Prof. J. H. C. Whitehead (Oxford), on "Homotopy Theory". The fact that most of the members were staying together in Dalton Hall, one of the halls of residence of the University, gave plenty of opportunity for those informal discussions which are so important a part of such meetings. It was the view of all those who took part that such a gathering should be a regular event, and a second colloquium will be held in 1950, probably in Oxford. To avoid clashing with the International Congress in September, this meeting will be held in the Easter vacation. The following were appointed a committee for the 1950 meeting: Prof. H. A. Heilbronn (Bristol), Prof. W. V. D. Hodge (Cambridge), Dr. W. Ledermann (Manchester), Prof. M. H. A. Newman (Manchester), Dr. D. Pedoe (London), Prof. H. R. Pitt (Belfast), Prof. W. W. Rogosinski (Newcastle), Prof. H. S. Ruse (Leeds), Dr. F. Smithies (Cambridge), Prof. A. G. Walker (Sheffield), Prof. J. H. C. Whitehead (Oxford), and Prof. E. M. Wright (Aberdeen).

Applied Electronics for Spectroscopists

DURING the week of July 23-30 a summer school on "Applied Electronics for Spectroscopists", sponsored by the Photoelectric Spectrometry Group, was held at University College, Southampton, by arrangement with the professor of electronic engineering, Prof. E. E. Zepler, and the professor of physics, Prof. A. M. Taylor, who with their staff gave generous help. Mr. C. G. Cannon was organiser for the Group. The syllabus was designed to meet the needs of spectroscopists requiring electronic techniques, and of electronic engineers who have to design suitable equipment. Its value was confirmed by the very good attendance. Lectures and demonstrations were given by Prof. Zepler, and by Messrs. S. W. Punnett, T. B. Tomlinson and G. H. Johns, of the University College. Prof. A. M. Taylor gave an introductory talk on the research in progress in the Physics Department, which stimulated many informal discussions. Three members of the Group, Messrs. P. Popper (Mitcham Works, Ltd.), J. C. O. Rochester (Sir Howard Grubb, Parsons and Co.), and E. Schwarz (Hilger and Watts, Ltd.), also contributed lectures on special subjects. A full account of the summer school will appear in the *Photoelectric Spectrometry Group Bulletin*, and it is hoped eventually to issue the complete notes of the course in book form.

Electrical Power System Analysis

A COURSE of lectures and discussions dealing with power system problems and with the analytical methods available for solving them was held in the Electrical Engineering Department of the Imperial College of Science and Technology, London, during the week September 19-23. The course was attended