Arrangements were made for submission to the authorities concerned of suggestions about items to be discussed at the African scientific and technical conferences already planned for the next two or three years; the Council endorsed the view that international technical conferences should not continue to be convened on the scale of the past three or four years. Major technical conferences in a particular field were regarded as fulfilling most valuable functions if held at intervals of five or more years; but during such intervals the necessary consultation and continuity could best be achieved by arranging meetings of small groups of specialists.

In order effectively to initiate the work of the Council, it was decided that the Council's secretariat should be as mobile as possible during the first year of its operation and that, during this period, it should visit the major centres in Africa, spending one or two months at each centre. The secretariat is expected to begin full-time work as from about the middle of this year and will be under the direction of Dr. E. B. Worthington, at present scientific secretary of the East African High Commission.

SEISMOLOGY IN GREAT BRITAIN, 1949-50

THE fifty-fifth annual report of the Seismological Investigations Committee of the British Association for the Advancement of Science has recently been published[1]. Continuing the work of Davison, Dr. A. T. J. Dollar has collected together macroseismic and other information into a paper entitled "Catalogue of Scottish Earthquakes, 1916–49"[2]. During this period there was evidence of 120 tectonic earthquakes, including nine principal earthquakes with associated accessory shocks, and five others of secondary or sympathetic origin, but no unequivocal evidence for twin earthquakes. The positions of epicentres indicate nine seismic regions, mainly grouped around the margins of the Grampian Highlands. Of these regions, Glen More, Breadalbane, Ochil Hills and south Argyllshire showed seismic activities noticeably greater than those in the four regions of Clydesdale, Pentland Hills, Lowther Hills and the Shetland Islands. Among seismic centres, Comrie remained outstanding with fifteen earthquakes for the period, followed by Stirling with eleven earthquakes, and Menstrie, Lochgilphead and Lochaber each with six earthquakes. Damage produced by these earthquakes was slight and almost entirely structural, generally involving no more than the dislodgment of tiles, slates or chimney-pots. In one case, the overthrow of a gable-end near Carron Bridge may have been occasioned by earth tremors in Stirling on July 16, 1940. No human injuries appear to have been caused, either directly or indirectly, by any of these disturbances.

The International Seismological Summary continues to be computed by J. S. Hughes and his staff, working at Kew Observatory by courtesy of the director of the Meteorological Office. On November 5, 1938, a very large, shallow-focus earthquake occurred near Hukusima, which was recorded at nearly every seismological observatory in the world and was followed by many after-shocks from nearly the same epicentre. This involved an unprecedented quantity of observational material which it was necessary to work up, and has caused some delay in publication. At the time of writing, calculations on data from April 1940 are in progress and completed calculations for the last quarter of 1939 are in the Press. During 1950 the gap between the dates of the earthquakes and the distribution of the International Seismological Summary concerning them has been noticeably diminished.

It is pleasing to note the increased interest in experimental seismology in British universities and research establishments, in addition to the routine investigations made by oil companies. The results of Admiralty research on microseisms have appeared in two papers. The first, entitled "A Theory of the Origin of Microseisms", is by M. S. Longuet-Higgins[3]. It is suggested that microseisms originate from standing waves on the surface of the ocean. The general conditions for fluctuations in the mean pressure over a wide area of the sea surface is that the frequency spectrum should contain groups of waves of the same wave-length travelling in opposite directions. The pressure fluctuations are then of twice the frequency of the corresponding waves and are proportional to the product of the wave amplitudes. Waves of compression in the ocean- and sea-bed should be set up, which may be of sufficient amplitude to be recorded as microseisms. For certain depths of the ocean the displacements will be increased by a factor of the order of 5 owing to resonance. Suitable conditions of wave interference over deep water would be probably greater than the effect of coastal wave reflexion. The second paper, by J. Darbyshire, is on the "Identification of Microseismic Activity with Sea Waves"[4]. In this paper three series of simultaneous wave and microseism records are examined. They give a clear indication that bands of microseismic waves from different sources can be distinguished by submitting seismograph records to frequency analysis. The agreement between the results of analysis and the theoretical expectation from the prevailing meteorological conditions appears to justify the assumption that microseismic waves of different periods travel independently. Under the simple meteorological conditions that have been studied, each band of microseismic activity can be identified with a band of sea waves of twice its period.

At the Imperial College of Science and Technology, London, the elastic properties of rocks at frequencies between 40 and 120 c./s. have been investigated, and also experiments have been made on the propagation of elastic waves, of frequency 500–1,000 c./s. At the Department of Mining, University of Leeds, field experiments using a Leet three-component seismograph have been made on ground amplitudes and frequencies resulting from blasting operations. At the Department of Geodesy and Geophysics, University of Cambridge, experiments have been made on refraction shooting at sea[5]. Dr. P. L. Willmore has also further developed his seismograph and it is about to be produced by Messrs. Hilger and Watts, Ltd., who also produce the new Milne–Shaw instruments.

As already mentioned[6], Dr. R. Stoneley has discussed the effect of a low-velocity layer below the surface layers of continents, on the amplitudes of surface waves[7].

E. TILLOTSON

[1] *Adv. of Sci.*, **7**, No. 27 (1950).
[2] *Trans. Geol. Soc. Glasgow*, **21**, 283 (1950).
[3] *Phil. Trans. Roy. Soc.*, A, **243**, No. 857 (1950).
[4] *Proc. Roy. Soc.*, A, **202** (1950).
[5] *Nature*, **165**, 193 (1950).
[6] *Nature*, **166**, 1054 (1950).
[7] *Mon. Not. Roy. Ast. Soc., Geophys. Supp.*, **6**, No. 1, 28 (1950).