

found it is impossible to say. According to Sotheby's, the auctioneers, attendance at their instrument sales has doubled in the past few years; the items sold include microscopes and clocks ranging from those of the fifteenth century to Victorian precision instruments. The number of collectors is obviously growing and many interesting pieces may therefore be going into potential obscurity. The task of preparing a catalogue is not easy. Dr Holbrook, who is curator of the Holbourne of Menstrie Museum in Bath and who has previously catalogued a collection of instruments in Frankfurt–Mainz, expects that it will take three years to collect information and illustrations for what promises to be a list of 3,000–4,000 scientific and historic instruments.

SEISMOLOGY

New Zealand Rumble

THE earthquake which hit Inangahua, in the South Island of New Zealand, on May 24, 1968, was the most closely studied of New Zealand's major earthquakes. In a preliminary report now published, the Department of Scientific and Industrial Research outlines the principal seismological, geological and engineering features. The earthquake, of magnitude 7 (one of these occurs on average every 8 years in New Zealand), was felt over most of the country and caused landslides and serious damage to houses, bridges and railway lines within a 10 kilometre radius of Inangahua.



From the recordings of the times of arrival of the seismic waves, at sixty stations in New Zealand and overseas, the exact origin of the earthquake was located to within 8 kilometres—the greatest precision achieved for any similar New Zealand earthquake. Numerous aftershocks were reported over an area about 40 by 25 kilometres, and the sequence and location of these helped to define how the shock travelled along local geological faults. Observations of ground deformation and landslides caused by the earthquake also give useful information about the geology of the area.

Property damage in the region around Inangahua was extensive, although the report notes proudly that the recently designed wood-frame buildings with continuous foundations externally and light reinforced chimneys suffered no structural damage. Some particular features of the damage, such as the small church in the area which was moved 30 centimetres to the west without displacement of the piles on which it originally rested, are not merely curiosities but geologically valuable pieces of information as well.

Parliament in Britain

by our Parliamentary Correspondent

Dungeness B

MR REGINALD FREESON, for the Ministry of Power, answered questions about Dungeness B power station. The upper part of the pressure vessel liners which had been distorted during welding were being replaced, and the first reactor would be delayed by about 18 months, the second by a year. The faults carried no implications for the AGR programme as a whole, he said, and the problem of who was to pay for the delay would in due course be sorted out by the CEGB and the companies concerned. (Oral answers, February 11.)

Concorde

MR J. P. W. MALLALIEU produced an explanation of why the Ferranti/Sagem navigation system developed for the Concorde is to be replaced in the pre-production and production aircraft by American equipment. The American equipment was lighter and smaller, he said, and had the advantage of meeting the specifications of Aeronautical Radio Incorporated, a United States association of airlines and equipment manufacturers in which BOAC and BEA participate. BAC and Sud Aviation had decided that the Ferranti–Sagem system was unlikely to prove attractive to customer airlines, and had recommended the fitting of the American systems. (Written answer, February 12.)

Animals in Research

MR MERLYN REES, for the Home Office, said that 4,755,680 experiments had been performed in 1967 under the Cruelty to Animals Act of 1876. Ten inspectors were responsible for seeing that the regulations were obeyed. In 1958, he said, there had been 3,245,990 such experiments, and five inspectors. (Written answers, February 13.)

Defence Establishments

MR JOHN MORRIS gave a complete list of British Defence Research Establishments, together with their dates of foundation. There are twenty-nine such establishments under the direct control of the Ministry of Defence—which does not include establishments like RRE at Malvern or RAE at Farnborough, which come under the Ministry of Technology. The total staff is 16,128, of whom 3,121 are scientists or engineers, and in 1968–69 the total cost of the establishments was £33.8 million. (Written answer, February 11.)

Government Computers

THE Government computers do not seem to be being used at peak efficiency. Mrs Judith Hart confirmed that three ICL 1905 E computers belonging to the Metropolitan Police, the Ministry of Defence and the Building Research Station were used for 50, 40 and 48 hours respectively each week. Target operating hours of 100, 80 and 80 hours had been set, to be met by November and December 1969 and March 1970. Mr David Howell pointed out that many commercial firms operated their computers on three shift working; was the minister's aim, which amounted to double shift working, not a grave waste of the computers? Mrs Hart said that the hours would be extended as it became possible, and as demand increased. (Oral answer, February 10.)