

been excluded. As the catalogue is intended for latitudes 55°–70° N., which includes nearly all of Finland, Sweden and Iceland, most of Norway, Denmark, Scotland and Alaska, the greater portion of Canada, and most of the Soviet Union, except the northernmost parts, the mean declinations of the stars must lie between 55° and 70°. Other conditions are that differences of magnitude of the stars must not exceed 2 and differences of right ascension for the stars of 1950.0 must lie between 2m. and 15m. More than 176 pages of tabular matter are included in the catalogue.

#### Earthquake Waves reflected at the Earth's Core

PROBABLY the first mention of a transverse wave reflected at the boundary of the earth's core is to be found in a paper by F. J. Scrase in 1931 ("The Reflected Waves from Deep Focus Earthquakes", *Proc. Roy. Soc., A*, 132; 1931). These pulses were observed by K. Wadate for an earthquake on November 13, 1932, and H. P. Berlage observed the waves at Amboina, his results being published in 1937 and 1939. S. W. Visser also noted the waves on the Amboina records of an earthquake on June 29, 1934, his book being published in 1937. R. A. Garrick (*New Zealand J. Sci. Tech.*, B, 31, No. 2; September 1949) has noted these pulses on New Zealand seismograms at epicentral distances of 0.92°, 2.25° and 3.45° for the earthquake of January 15, 1948, and has tabulated the readings. These results extend the observations by E. Tillotson (1939) and form a very valuable check on the "Seismological Tables".

#### Iron and Steel Institute: Awards

THE following awards have been made by the Iron and Steel Institute: *Bessemer Medal* for 1953, to R. Mather, of Skinningrove Iron Co., Ltd., and past-president of the Institute, for his distinguished services to the Institute and to industry; *Sir Robert Hadfield Medal* for 1953, to W. E. Bardgett, research manager of the Central Research Laboratories of the United Steel Companies, Ltd., in recognition of his contribution to the development of alloy steels, with particular reference to steels for service at elevated temperatures; an *Andrew Carnegie Silver Medal* for 1952, to Dr. E. T. Turkdogan, now with the British Iron and Steel Research Association, for his research on slag-metal reactions reported in various papers, his results being written in collaboration with Dr. W. R. Maddocks (*J. Iron and Steel Inst.*, July 1949, and June and September 1952); *Ablett Prize* for 1952, jointly (£50 each) to Dr. S. A. Burke and G. A. Sparham, of the British Coal Utilization Research Association, for their paper on the automatic control of coal feed in steelworks gas-producers (*J. Iron and Steel Inst.*, November 1952). No award was made of the Williams Prize.

#### Grants of the U.S. National Science Foundation Awards

THE National Science Foundation has recently made seventy-eight grants, totalling 685,200 dollars, to institutions in the United States for research in the biological and the physical sciences and for the support of studies and conferences on science and scientific education. This is the second group of awards to be announced under the Foundation's programme for the support of basic research, bringing the total number of research grants made this year to one hundred and thirty, worth 1,340,650 dollars.

The fields included are astronomy, chemistry, developmental biology, earth sciences, engineering, environmental biology, genetic biology, mathematics, microbiology, molecular biology, physics, psychobiology, regulatory biology, research education in the sciences, scientific information, studies in science and systematic biology. The duration of research grants in this latest group of awards ranges from eight months to three years, with an average length of 1.6 years; the average grant amounts to 5,475 dollars a year.

#### University of London: Appointments

THE following appointments have been made in the University of London: Mr. J. Durbin, lecturer in statistics at the London School of Economics and Political Science, to the university readership in statistics tenable at the School; Dr. D. A. McDonald, senior lecturer in physiology at St. Bartholomew's Hospital Medical College, to the university readership in physiology tenable at the College; Mr. A. E. Smailes, reader in geography at University College, London, to the university readership in geography tenable at Queen Mary College.

#### Announcements

DR. KEITH MURRAY, rector of Lincoln College, Oxford, has been appointed chairman of the University Grants Committee in succession to Sir Arthur Trueman, who is retiring on October 1 for reasons of health.

THE second international conference on the biology and cultivation of the mushroom will be held at Gembloux, Belgium, during June 16–24. Further information can be obtained from the honorary secretary, Mlle. L. Engels, C.E.R.E.C., Institut Agronomique de l'Etat, Gembloux.

THE spring conference of the Institute of Metal Finishing will be held in the Hotel Majestic, Harrogate, during April 22–25. The conference will begin with an informal reception and dinner on April 22, and during the next three days there will be four technical sessions on, respectively, organic and other non-electrodeposited coatings, electrodeposition, fundamental electrode processes and shop practice. Further information can be obtained from the Conference Secretary, 32 Great Ormond Street, London, W.C.1.

THE Textile Institute is offering a Cotton Industry War Memorial Trust Scholarship, of maximum value £950, for a three-year course in textile technology at an advanced level, with provision for industrial training and experience of a special character in Britain or overseas. The closing date for applications is April 30. The Institute is also offering a new scholarship, to be known as the 'Peter Coats' Scholarship, since it has been established by the will of the late Mr. Coats, of Paisley, and this award, which is of maximum value £200, is intended to enable a person who has already been awarded or promised a scholarship in advanced textile technology to pursue a year of full-time study preparatory to taking up his main course at a university or college. The closing date for applications is May 30. Candidates for both these awards must be male British nationals less than twenty-four years of age. Application forms and further information can be obtained from the General Secretary, Textile Institute, 10 Blackfriars Street, Manchester 3.