

of continuity and field experiments. At a conference held recently at Wellington between representatives of the fruit-growers, the Department of Agriculture, the Department of Scientific and Industrial Research, and the Cawthron Institute, it was decided to form a fruit research organisation for New Zealand. Arrangements have been made to purchase an orchard, a research programme has been planned, and the Cawthron Institute and the Department of Agriculture have agreed to lend the members of their staff who are mainly engaged on fruit research. A horticulturist is to be appointed to work on root-stock improvement and introduction, and it is probable that he may first study methods and results achieved in Great Britain at the East Malling Research Station, where Mr. R. G. Hatton is engaged on root-stock improvement and other activities with Empire Marketing Board funds. New Zealand fruit-growers are contributing substantially to the expenses of the scheme, and the remainder of the cost is being met by the New Zealand Government.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—An engineer at the Building Research Station, Garston, near Watford, for work mainly in connexion with research on steel structures—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, Westminster, S.W.1 (Mar. 10). A public analyst for the City of London (Food and Drugs (Adulteration) Act, 1928) and agricultural analyst for the City and Port of London (Fertilisers and Feeding Stuffs Act, 1926)—The Town Clerk, Public Health Department, Guildhall, E.C.2 (Mar. 10). A lecturer in

chemistry at the Widnes Municipal Technical College—The Clerk to the Governors, Municipal Technical College, Town Hall, Widnes (Mar. 17). A woman sanitary inspector and health visitor for the Royal Borough of Kensington—The Medical Officer of Health, Town Hall, Kensington, W.8 (Mar. 18). A resident lecturer in geography at the Diocesan Training College for Women Teachers, Derby—The Principal, Diocesan Training College for Women Teachers, Derby (Mar. 21). An assistant on the higher technical staff of the Library in the Science Museum, South Kensington—The Director and Secretary, Science Museum, South Kensington, S.W.7 (Mar. 22). An organiser of agricultural education under the Administrative County of Cambridge—The Clerk of the County Council, County Hall, Cambridge (Mar. 22). A lecturer in metallurgy at the University College of Swansea—The Registrar, University College, Singleton Park, Swansea (Mar. 28). An assistant to the Chief Officer of the Imperial Bureau of Fruit Production—The Chief Officer, Imperial Bureau of Fruit Production, East Malling Research Station, East Malling, Kent (Mar. 31). An assistant lecturer in geography in the University of Birmingham—The Secretary, The University, Birmingham (April 26). A professor of zoology in the University College of North Wales—The Registrar, University College of North Wales, Bangor (May 5). A secretary to the Lagos Executive Development Board, Nigeria—The Crown Agents for the Colonies, 4 Millbank, Westminster, S.W.1 (quoting M/2029). A sanitary inspector under the Sudan Medical Service—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, S.W.1.

Our Astronomical Column.

Report of the Paris Observatory for 1928.—This report contains an interesting summary of the recent comparison of longitudes of various observatories by wireless signals, which was organised by M. B. Baillaud and General Ferrié.

The following are three arcs girdling the world:

Algiers to San Diégo	. 8 ^h 0 ^m	56.900 ^s ± 0.002 ^s
San Diégo to Zi-Ka-Wei	8 5	28.731 ± 0.006
Zi-ka-Wei to Algiers	. 7 54	34.362 ± 0.006

The sum of the three shows an error of only 0.007 sec.

The difference Paris-Greenwich comes out 9^m 20.914^s, which is less than the "Nautical Almanac" value by only 0.016^s. There was formerly an appreciable difference between the English and the French determinations of this arc, but they have now been brought into satisfactory accord.

The catalogue of 10656 "étoiles de repère" for the Astrographic Catalogue is on the point of being issued.

Dark Objects in Barnard's Photographic Atlas.—In a fifth note on the dark objects in Barnard's Photographic Atlas, published in the *Atti della Pontificia Accademia della Scienze (Nuovi Lincei)* for 1929, Prof. G. Hagen of the Vatican Observatory points out that the last ten plates in Barnard's Atlas confirm the suggestion of the preceding forty plates, that not a single one of the dark objects selected by Barnard for his two lists differs in any way from W. Herschel's fifty-two extensive nebulosities. Moreover,

all of those within reach of the Vatican refractor could be estimated in density on the numerical scale with which all Herschel's regions were examined. It may safely be concluded that all the dark markings represented on the fifty plates of the Atlas, whether selected or passed over by Barnard, correspond with the Herschel regions.

Distribution of Stars of Different Spectral Types.—Dr. Otto Seydl of Prague has published a series of maps which give the distribution of stars of the different spectral types referred to galactic co-ordinates. The stars of types B0 to B5 are confined to a narrow belt along the galaxy. Those of B8 to A3 are in a wider belt, with a few islands in higher latitudes; in the next map, A5 to F2, the galaxy is still discernible as a richer region, but there is a strong minority in higher latitudes; the same description applies to the next two maps, F5 to G0 and G5 to K2. For K5 to Mc, galactic concentration is again strongly in evidence, but less so than in B0 to B5. There is a final map showing all types combined; naturally the whole map is fairly full, but the galaxy is by far the richest region. Star density is indicated by depth of shading in the manner adopted to show ocean depths. The Henry Draper Catalogue was used in preparing the maps, which include stars of magnitude 7.0 and brighter. There is a description (in English) of the maps, together with tables; the whole forms Cis. 6 of the *Publications* of the National Observatory of Prague.