

RADIO TIME-SIGNALS.

Reception.—An order has been placed for the purchase and the installation of a modern receiving outfit for radio time-signals at the Observatory.

Transmission.—Demands for a radio time service are continually increasing, and almost every steamer approaching New Zealand makes a request for radio time-signals. No regular service has yet been established, although a large amount of experimental work has been done, and many signals have been sent from the Observatory standard clock, by the Telegraph Department—some from the Awanui Radio on a wave-length of 2,000 metres, and some from the Wellington Radio on a wave-length of 600 metres. Proposals for the establishment of a radio time service are under consideration by the Government.

LONGITUDE.

With the rapid advances that have been made in radio-telegraphy, astronomers the world over have been of necessity closely associated, particularly as some of the advances made lead to the most accurate method known of determining longitude. Suggestions for the determination of a fundamental longitude for Australia have been made by the Australian astronomers, and New Zealand has been invited to co-operate and determine a fundamental longitude for the Dominion. The matter has also received the attention of the Bureau des Longitudes, Paris, which has already, with the co-operation of the American Naval Observatory, determined the longitude between Paris and Washington, some 3,840 miles; this being the longest direct determination ever made.

The Bureau des Longitudes has proposed to select five fundamental reference points—namely, at the Royal Observatory, Greenwich; at the Paris Observatory; near San Francisco; near Shanghai; and in New Zealand; and, with the assistance of the countries interested, to determine their longitudes and latitudes with the highest precision. The subject is one of the greatest scientific and commercial importance, and is well worthy of the serious attention of New Zealand, especially as the co-operation of the Dominion is necessary for the carrying-out of the proposal.

SEISMOLOGY.

The Government Seismologist, Mr. George Hogben, C.M.G., M.A., F.G.S., is in charge of the Milne seismograph No. 20 installed at the Observatory. As Mr. Hogben has found it necessary to ask to be relieved of some of the scientific duties in seismology, it has been decided to appoint Mr. C. E. Adams, D.Sc., F.R.A.S., as Assistant Government Seismologist, in addition to his other duties as Government Astronomer.

At the Science Congress of the New Zealand Institute, held at Christchurch in February, 1919, a discussion took place on Seismology, and a resolution was passed urging upon the Government the importance of providing a more modern type of seismograph for the Dominion.

LIBRARY AND PUBLICATIONS.

Many valuable publications have been presented to the library by other observatories, and for these gifts sincere thanks are tendered. Among these may be mentioned a set of the back numbers of the *Monthly Notices* and of the *Memoirs of the Royal Astronomical Society*, presented by the society, and a set of the *Bulletin de la Carte du Ciel*, presented by the French Minister of Education and Fine Arts.

The following bulletins of the Observatory have been published and distributed :—

Bulletin 17.—Astronomical Notes. Phenomena for November and December, 1919—Nova Aquilæ No. 3. *N.Z. Journal of Science and Technology*, September, 1918.

Bulletin 18.—Astronomical Notes. Nova Aquilæ No. 3—Notes by A. C. Gifford, M.A., F.R.A.S.; J. T. Ward; C. M. Hector, M.D., B.Sc., F.R.A.S.; and E. L. Morley. *N.Z. Journal of Science and Technology*, November, 1918.

Bulletin 19.—Report of the Government Astronomer, 20th June, 1917, to 31st August, 1918.

Bulletin 20.—Astronomical Tables for the year 1919.

Bulletin 21.—Astronomical Notes. The Combined Magnitudes of Double or Multiple Stars; the Origin of New Stars; On the Character of Spectral Lines due to a Sphere or Spherical Shell of Transparent Luminous Gas expanding uniformly: A. C. Gifford. *N.Z. Journal of Science and Technology*, January, 1919.

Bulletin 22.—Astronomical Notes. The Origin of New Stars (No. 2): A. C. Gifford. The Date of Easter. *N.Z. Journal of Science and Technology*, March, 1919.

Bulletin 23.—Astronomical Notes. Description of a Planisphere: D. M. Y. Somerville. Notes on the Calculation of an Ephemeris of a Comet. *N.Z. Journal of Science and Technology*, May, 1919.

GIFTS.

Dr. W. W. Campbell, Director of the Lick Observatory, California, has presented three photographs on glass of the solar corona obtained during the total eclipse of the sun on the 8th June, 1918. The photographs are the best ever obtained at a solar eclipse and are the first ever received in New Zealand. Among other gifts were photographs on glass of the new 72 in. reflecting telescope near Victoria, B.C., from Dr. J. S. Plaskett, Director of the Dominion Astrophysical Observatory, Canada; and of the Kodaikanal Observatory, and of the sun, sun spots and prominences, from Mr. J. Evershed, Director of the Kodaikanal Solar Observatory, India. For these and other gifts hearty thanks are tendered to the donors.