

*Time Service.*

The time service has been maintained, and the regular signals have been sent out. The signals have been transmitted daily. The total number of time signals sent from the Observatory was 1,684. Of these, 462 were sent by wireless telegraph, 643 were sent by special circuit to the Telegraph-office, 365 by the signal lights at the Observatory, 102 by switching off lights at the Harbour Board building at Auckland, 101 by dropping the time-ball at Lyttelton, and 11 by telephone.

No radio time signals were sent out on the following dates owing to line interruptions between the Observatory and the Wellington Radio Station: 1928—16th, 22nd, 28th August; 28th September; 14th October; 8th December.

The present programme at the Observatory provides for the following time signals, most of which are sent by the Observatory standard clock, which is usually kept accurate to the nearest second of time—

*Automatic Time Signals—*

- (1) To the General Post Office, Wellington, by Telegraph, daily, except on Government holidays and on Sundays:
- (2) To ships and to the general public at Wellington, by electric lights at the Observatory, daily:
- (3) To the Auckland Harbour Board, by electric lights at Auckland, on Tuesdays and Fridays, except Government holidays:
- (4) To the South Island telegraph-offices, by telegraph, on Tuesdays and Fridays, except Government holidays:
- (5) To the Lyttelton Harbour Board, by dropping the time-ball at Lyttelton, on Tuesdays and Fridays, except Government holidays:
- (6) Radio time signals through the Wellington Radio Station (ZLW), on Tuesday and Friday evenings at 8.30 p.m., except on Government holidays:
- (7) Radio time signals through the Wellington Radio Station (ZLW), every day at 10.30 a.m. The Radio call signal for the Observatory is ZLO, and this sign is used in transmitting radio time signals.

*Non-automatic Time Signals.—*

- (1) To ships and watchmakers in Wellington and to the Public Works Department by telephone, on application to the Observatory.
- (2) The Observatory automatic time signals sent to the General Post Office are distributed by telegraphic hand signals to some 2,300 telegraph and telephone offices, distributed all over New Zealand, at 9 a.m. daily.
- (3) Similar hand signals are also sent to all railway offices in New Zealand at 9 a.m. daily—by telegraph to 221 offices, and by telephone to 257 stations.

*Wellington General Post Office Clock.*—The Post-office clock is checked at 3 p.m. on Mondays, Tuesdays, Thursdays, and Fridays by the broadcast signal through Station 2YA, Wellington. On Wednesdays, when Station 2YA is not broadcasting, the clock is frequently checked by the signal heard through the air. This clock is not under the control of the Observatory. The greatest errors were 9 seconds slow on the 29th May, and 14 seconds fast on the 5th December.

*Government Buildings Clock.*—The Government Buildings clock has been kept under fairly close control. A record is obtained at the Observatory by direct circuit from the clock, and the adjusting weights on the pendulum are altered from time to time. The greatest errors of this clock were 53.0 seconds slow on March, 28th, and 27.6 seconds fast on June 2nd.

*Sun-spots.*

The regular observation of sun-spots has been discontinued.

An enlarging camera for photographing the sun-spots has been obtained, and is fitted for use with the Wellington City Council's 9 in. equatorial telescope. The camera is available for any particularly interesting groups of sun-spots.

*International Astronomical Union.*

By the courtesy of the Central Astronomical Bureau, arrangements have been made for this Observatory to receive advice of all important astronomical discoveries. The information is forwarded by the Bureau at Copenhagen to this Observatory through the Melbourne Observatory.

*“New Zealand Nautical Almanac.”*

An article on the Dominion time-service arrangements, giving full particulars of all the time signals supplied by the Observatory, was prepared for and published in the “New Zealand Nautical Almanac.”

*Occultations.*

In response to a request to Professor E. V. Brown, F.R.S., for more observations of occultations, the following New Zealand observatories have expressed their willingness to make the necessary observations: Christchurch, Dunedin, Hawera, Nelson, New Plymouth, Wanganui, Wellington. Accurate time signals are sent out from the Dominion Observatory on two evenings a week at 9h. G.M.T., and every day at 23h. G.M.T. It will be necessary to supply additional time signals to obtain the required accuracy in these observations. In addition to the ordinary occultation observations, a photographic method is in use at the Wellington Observatory by means of which the moon