DOMINION OBSERVATORY

Acting-Director: Mr. R. C. Hayes

Time Service

Control of Clocks.—The method of controlling the standard clocks has been the same as in previous years.

Time Signals sent out.—The usual time-service arrangements have continued without interruption. The error of the ZLW radio time signals did not exceed 0·28 second at any time during the year, and on most occasions it was less than 0·25 second. There were partial failures of the ZLW signals on 11th and 26th August, and on 7th December. The cause of these was outside the Observatory, except the one on 7th December, which could not be traced.

By arrangement with the National Broadcasting Service, extra time signals were sent out through 2YA on 14th January for observers of the solar eclipse on that day.

The number of telephone calls for correct time maintained a high level throughout the year, but did not exceed the number for the previous year.

Public Clocks.—The Government Buildings clock was checked daily at 9 a.m. and regulated when necessary. The maximum errors observed during the year 1945 were 41 seconds fast, and 35 seconds slow.

The longest uninterrupted run of the synchronous electric clock was from 12th February to 31st May (108 days). The maximum errors observed during that period were 7 seconds fast and 55 seconds slow.

Free Pendulum.—The free pendulum suffered considerable disturbance during the year. In October it was dismantled for extensive improvements to the mechanism.

Clocks.—Towards the end of the year nearly all the clocks were overhauled by the Dominion Physical Laboratory and remounted on the clock-room walls. This is more satisfactory for the clocks and also considerably increases the available floor space in the clock-room.

Chronometer Rating.—During the year two Navy chronometers were received for rating and safe custody. One chronometer was put through daily rating over a period of ten days for the Public Works Department.

Seismology

Summary of Seismic Activity in New Zealand in 1945.—The principal seismic feature of the year 1945 was the outbreak of activity in the Hanmer region on 30th August. Three shocks reached or slightly exceeded M-M VI, and a considerable number of smaller ones also occurred. Although some damage was done, none of the shocks could be classed as "destructive." They were of abnormally shallow origin and affected a comparatively small area. The activity was of short duration.

Rather strong shocks occurred in Hawke's Bay on 2nd January, and in the Wairarapa on 7th June. On 20th–21st July an outbreak of slight activity occurred in the Rotorua region. An isolated slight shock originated forty to fifty miles west of Auckland on 31st July. It was felt slightly in parts of Auckland City area. A group of slight or moderate shocks occurred near Tokaanu about the middle of October.

During 1945, 127 shocks were reported felt in some part of New Zealand; 73 of these were felt in the North Island and 58 in the South Island. Four were felt in both Islands. These figures are based on reports from Post Office and lighthouse officials and from several private observers.

New Seismograph Station.—The Observatory assisted with the establishment of a new seismic station at the Chateau Tongariro.