

The Adie Magnetographs.—These have been kept in continuous operation, and all the daily magnetograms developed. A large portion of these have also been measured at hourly intervals for declination, horizontal force, and vertical force. In addition, the measurement of the curves for the previous two years, 1910 and 1911, was completed, and the mean annual values derived from the international "quiet" days have been found to be as follows :—

Year.	Declination. (East of North.)	Horizontal Force. C.g.s.	Inclination.	Vertical Force. C.g.s.
1910 (January–December) ..	16° 37·6' E.	0·22511	67° 54·8' S.	0·55474
1911 ..	16° 39·0' E.	0·22494	67° 56·2' S.	0·55497
Increment ..	+ 1·4'	– 0·00017	+ 1·4'	+ 0·00023

The above have been forwarded to Kew, for publication in their list of values for observatories.

The necessary absolute magnetic observations for standardizing the magnetic curves have been duly made, and computed throughout the year.

Twelve of the principal magnetograms obtained are published herewith, reduced to three-eighths of the originals.

For purposes of comparison it is noted that on the reproduced curves the ordinates have the following values :—

Declination curves ..	..	..	..	+ 1 mm. = – 3·0'.
Horizontal force curves ..	..	..	..	+ 1 mm. = – 0·00014 c.g.s. unit.
Vertical force curves ..	..	..	..	+ 1 mm. = – 0·00012 c.g.s. unit.

It has been found that the constancy of base-line of the magnetographs has much improved of late years upon that of the early years of the running of these magnetographs. This is usually experienced in new observatories, a steady state being gradually attained.

A table of monthly means of hourly values from all days for the years 1902, 1903, 1904 is published herewith. It will be useful for comparing the mean diurnal variation at Christchurch with that at other observatories, especially with respect to seasonal differences.

The Milne Seismograph No. 16.—This instrument has been kept continuously recording, and all the daily seismograms have been developed and records measured. Records were obtained of thirty-one earthquakes, a smaller number than in previous years. This may partly be explained, however, by the fact that night-tremors due to local and instrumental effects have been more pronounced, and the tendency of these is to mask the effects of some of the smaller and far-distant shocks. The boom period of the instrument has been approximately 15 seconds through the year, as recommended. At first, after the removal and replacement of the boom during the installation of the new recorder, difficulty was experienced in keeping the period high, but now that the condition of the instrument has become more stable, it is intended to bring the period up to 20 seconds, to bring the recording into line with that of the Sydney seismograph-station, which now runs with the period at 20 seconds.

A table of times, &c., of earthquakes recorded here is appended, and it will be noticed that several of the records are those of mega-seisms of more or less violence occurring in the Dominion.

The seismograms of ten of the principal earthquakes are published herewith.

Meteorological Observations.—The usual daily observations of air-pressure, temperature, humidity, cloud, and wind have been made at 9·30 a.m. and at 5 p.m. throughout the year. The recording barograph and thermograph have been kept in continuous operation. Daily epitomes of meteorological observations have been published daily in the newspapers, and monthly returns have been forwarded for the information of the Weather Forecast Department.

In conclusion, I have to acknowledge the services of my assistant, Mr. T. Maben, throughout the year. I have also to return thanks to the various scientific institutions and observatories which have contributed publications and observations to this Observatory.

I have, &c.,

HENRY F. SKEY, B.Sc.,
Officer in Charge.