

## MAGNETIC OBSERVATORY, CHRISTCHURCH.

Director: H. F. SKEY.

## SUMMARY OF OPERATIONS IN 1935.

During the year the usual magnetic, seismological, and meteorological observations have been carried out. Additional observations have also been made since last January to assist in forecasting for aviational purposes.

## TERRESTRIAL MAGNETISM.

The Eschenhagen magnetographs at Amberley Sub-station have been kept recording continuously, and the resulting magnetograms have been developed, &c., and measured for mean ordinates during every Greenwich hour. The ordinates have been reduced, and, by the aid of twice-monthly absolute magnetic observations at the sub-station, the mean hourly values have been calculated. Any short occasional failure of the Eschenhagen records has been made good by the help of the Adie D and H magnetograms. In May the Adie instruments were removed to Amberley and installed in the underground chamber there.

Calculated from these mean hourly values, the mean monthly values obtained for 1935, Amberley, are:—

*Mean Monthly Values* of the magnetic elements from hourly mean values (all days), 1935, at Amberley Sub-station:—

1935.	D.	H.	Z.
January .. .. .	18 04.7	22324 $\gamma$	-55219 $\gamma$
February .. .. .	18 05.2	22319	55218
March .. .. .	18 05.0	22310	55213
April .. .. .	18 05.8	22311	55217
May .. .. .	18 05.8	22317	55224
June .. .. .	18 06.1	22318	55224
July .. .. .	18 06.9	22317	55226
August .. .. .	18 07.2	22323	55223
September .. .. .	18 07.3	22310	55225
October .. .. .	18 06.8	22312	55229
November .. .. .	18 07.0	22320	55232
December .. .. .	18 07.7	22319	55233
Year .. .. .	18 06.3	22317	55223
$\Delta$ from 1934 .. .. .	+3.4	-14.6 $\gamma$	+6.3 $\gamma$ (Numerical decrease).
	Y.	X.	T.
Year .. .. .	06935.2 $\gamma$	21211.7 $\gamma$	59562.3 $\gamma$
$\Delta$ from 1934 .. .. .	+16.1 $\gamma$	-20.9 $\gamma$	-11.3 $\gamma$
			$\phi$
			-67° 59'.73
			-0'.66

The secular change in the magnetic elements has been somewhat greater than during the previous year; sunspottedness is now approaching its epoch of maximum.

Improvements have been made to the Amberley Sub-station, and some necessary repairs have been made to the Observatory buildings at Christchurch.

## SEISMOLOGY.

During the year there have been recorded 191 seismic disturbances at Christchurch. In February, 1936, the Galitzin seismographs and the Wood-Anderson seismograph were removed to the underground cellar, formerly occupied by the Adie recorders.

The Galitzins have continued to record with equal magnification on all components, and constants have been determined at intervals. Provisional monthly bulletins were issued promptly to the Dominion Observatory, Wellington, and to co-operating stations overseas. Wood-Anderson records have been lent regularly to the Dominion Observatory. They have been of considerable assistance here in interpreting other records. It is hoped in the near future to acquire a Benioff vertical seismometer, with both long- and short-period galvanometers, to help more especially in the interpretation of results of Wood-Anderson recordings.

From 31st July, 1935, to 8th February the assistant, Mr. H. F. Baird, was relieving Mr. Wadsworth, Director of the Apia Observatory, Western Samoa.

The Carnegie Institute of Washington has sent to Christchurch one of its continuously recording cosmic-ray meters. This has been housed in a special insulated building near the Observatory and is functioning well.

The usual programme of atmospheric potential-gradient observations was continued satisfactorily.

*Approximate Cost of Paper.*—Preparation, not given; printing (964 copies, including map and graphs), £140.

By Authority: G. H. LONEY, Government Printer, Wellington.—1936.

Price 2s. 3d].