

published were received in Wellington on the 3rd August, 1926, from the Hydrographer to the Admiralty.

The work of measuring the times and heights of high and low water was again performed at the Tidal Institute, University of Liverpool, England.

MAGNETIC OBSERVATORY.

During the year the Eschenhagen magnetographs at Amberley and the Adie magnetographs at Christchurch have been kept in operation. The mean values for the year 1926 of the magnetic elements obtained from the hourly measurements of the magnetograms are as follows :—

				Mean Value, 1926.	Change since 1925.
Magnetic declination (east) .. .. .	..	..	..	17° 26·0'	+ 4·87'
Magnetic horizontal force .. .. .	..	..	..	0·22141 C.G.S.	—25 $\gamma$
Magnetic inclination (south) .. .. .	..	..	..	68° 15·6'	+ 1·4'
Northerly component .. .. .	..	..	..	0·21124 C.G.S.	—34 $\gamma$
Easterly component .. .. .	..	..	..	0·06633 „	+23 $\gamma$
Vertical component .. .. .	..	..	..	0·55525 „	+ 3 $\gamma$
Total magnetic force .. .. .	..	..	..	0·59777 „	—34 $\gamma$

The customary diagrams showing diurnal variations have been drawn for publication in the “*Records of the Survey of New Zealand*” and the coefficients of the first four terms in Fourier series have been computed for the seasonal and annual diurnal variations.

Milne seismograph No. 16 has been kept in operation, and the resulting seismograms measured for publication.

The customary daily meteorological observations have been made. In addition many observations of wind directions and velocities in the upper air have been made with apparatus lent by the New Zealand Institute. Mr. Baird, assistant, was on loan with the apparatus to the Scientific and Industrial Research Department during February for the purpose of making such observations at the Wigram Aerodrome, Sockburn, and it is expected shortly to publish records up to date of nearly one hundred balloon flights, since the Secretary of the Scientific and Industrial Research Department has kindly offered to allow the Sockburn observations to be included with the Christchurch series. This is contingent on the permission of the New Zealand Institute being obtained.

Mr. H. F. Baird and Mr. P. W. Glover have co-operated in the work, and beyond ordinary hours much labour has been expended upon this research.

Hourly values of magnetic elements for 1926 and 1906 are prepared for publication in the forthcoming volume IV of “*Records of the Survey of New Zealand*.”

The mean annual values of the magnetic elements, as far as they are available, are shown in Table D following.

TABLE D.  
*Mean Annual Values of the Magnetic Elements at Christchurch Observatory.*

Date.	Declination E. of N.	Annual Change.	Horizontal Force.	Annual Change.	Vertical Force.	Annual Change.	Inclination South.	Annual Change.	Hourly Values published in Annual Reports
	° ' "	' "	C.G.S. Unit.	$\gamma$	C.G.S. Unit.	$\gamma$	° ' "	' "	
1902 ..	16 15·1	+3·2	0·22694	—25	0·55277	+ 9	67 40·80	+1·50	1912–13
1903 ..	16 18·3	+3·5	0·22669	—25	0·55286	+21	67 42·30	+1·80	1912–13
1904 ..	16 21·8	+3·6	0·22644	—16	0·55307	+41	67 44·10	+1·70	1912–13
1905 ..	16 25·4	+2·4	0·22628	—23	0·55348	+28	67 45·80	+1·80	1919–20
1906 ..	..	..	..	..	..	..	..	..	..
1907 ..	16 31·1	..	..	..	..	..	..	..	..
1908 ..	..	..	..	..	..	..	..	..	..
1909 ..	..	..	..	..	..	..	..	..	..
1910 ..	16 37·6	+1·4	0·22515	—27	0·55485	+12	67 54·80	+1·40	1920–21
1911 ..	16 39·0	+2·5	0·22494	—23	0·55497	— 9	67 56·20	+1·00	..
1912 ..	..	..	..	..	..	..	..	..	..
1913 ..	16 44·0	+0·8	0·22449	—35	0·55478	—13	67 58·20	+1·60	1913–14
1914 ..	16 44·8	+2·2	0·22414	—27	0·55465	+ 7	67 59·80	+1·67	1914–15
1915 ..	16 47·0	+2·8	0·22387	—32	..	..	..	..	*Sept., 1918
1916 ..	16 49·8	+3·2	0·22355	—27	..	..	..	..	*Sept., 1918
1917 ..	16 53·0	+2·7	0·22328	—24	0·55486	+30	68 04·80	+1·90	*Mar., 1921
1918 ..	16 55·7	+2·9	0·22304	—24	0·55516	— 9	68 06·70	+1·10	1918–19
1919 ..	16 58·6	+3·1	0·22280	—19	0·55507	+18	68 07·80	+1·40	1919–20
1920 ..	17 01·7	+2·9	0·22261	—20	0·55525	+03	68 09·20	+1·10	†1920–21
1921 ..	17 04·6	+3·7	0·22241	—24	0·55528	—21	68 10·30	+0·90	†1921–22
1922 ..	17 08·3	+3·4	0·22217	—08	0·55507	+19	68 11·20	+0·80	†1922–23
1923 ..	17 11·7	+4·7	0·22209	—21	0·55526	—18	68 12·00	+0·73	†Vol. I.
1924 ..	17 16·4	+4·7	0·22188	—22	0·55508	—14	68 12·73	+1·47	†Vol. II.
1925 ..	17 21·1	+4·9	0·22166	—25	0·55522	+ 3	68 14·20	+1·4	†Vol. III.
1926 ..	17 26·0	..	0·22141	..	0·55525	..	68 15·60	..	..

\* Mean hourly values published in *New Zealand Journal of Science and Technology*. † Special publication. ‡ *Records of the Survey*.