

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.	γ	C.G.S. Unit.	γ	° ' "	' "	
1902 ..	16 15.1		0.22694		0.55277		67 40.80		1912-13
1903 ..	16 18.3	+3.2	0.22669	-25	0.55286	+9	67 42.30	+1.50	1912-13
1904 ..	16 21.8	+3.5	0.22644	-25	0.55307	+21	67 44.10	+1.80	1912-13
		+3.6		-16		+41		+1.70	
1905 ..	16 25.4		0.22628		0.55348		67 45.80		1919-20
1906 ..	16 28.9	+3.5	0.22599	-29	..	+28	..	+1.80	†Vol. IV.
1907 ..	16 31.1	+2.2	..	-21	..	..	..	..	..
		+2.2		..		..		..	
1908 ..	..	..	..	..	..	..	..	..	..
1909 ..	..	..	..	..	..	..	..	..	..
1910 ..	16 37.6		0.22515		0.55485		67 54.80		1920-21
		+1.4		-27		+12		+1.40	
1911 ..	16 39.0		0.22494		0.55497		67 56.20		..
1912 ..	..	+2.5	..	-23	..	-9	..	+1.00	..
1913 ..	16 44.0		0.22449		0.55478		67 58.20		1913-14
		+0.8		-35		-13		+1.60	
1914 ..	16 44.8		0.22414		0.55465		67 59.80		1914-15
1915 ..	16 47.0	+2.2	0.22387	-27	..	+7	..	+1.67	*Sept., 1918
1916 ..	16 49.8	+2.8	0.22355	-32	..	..	..	..	*Sept., 1918
		+3.2		-27		..		..	
1917 ..	16 53.0		0.22328		0.55486		68 04.80		*Mar., 1921
1918 ..	16 55.7	+2.7	0.22304	-24	0.55516	+30	68 06.70	+1.90	1918-19
1919 ..	16 58.6	+2.9	0.22280	-24	0.55507	-9	68 07.80	+1.10	1919-20
		+3.1		-19		+18		+1.40	
1920 ..	17 01.7		0.22261		0.55525		68 09.20		†1920-21
1921 ..	17 04.6	+2.9	0.22241	-20	0.55528	+03	68 10.30	+1.10	†1921-22
1922 ..	17 08.3	+3.7	0.22217	-24	0.55507	-21	68 11.20	+0.90	†1922-23
		+3.4		-08		+19		+0.80	
1923 ..	17 11.7		0.22209		0.55526		68 12.00		†Vol. I.
1924 ..	17 16.4	+4.7	0.22188	-21	0.55508	-18	68 12.73	+0.73	†Vol. II.
1925 ..	17 21.1	+4.7	0.22166	-22	0.55522	-14	68 14.20	+1.47	†Vol. III.
		+4.9		-25		+3		+1.40	
1926 ..	17 26.0		0.22141		0.55525		68 15.60		†Vol. IV.
1927 ..	17 31.3	+5.3	0.22135	-06	0.55538	+13	68 16.20	+0.60	
1928 ..	17 37.4	+6.1	0.22126	-09	0.55566	+28	68 17.30	+1.10	†Vol. V.

* Mean hourly values published in *New Zealand Journal of Science and Technology*.

† Special publication.

‡ Records of the Survey of New Zealand.

PROPOSED OPERATIONS, 1929-30.

Geodetic Triangulation.—South Island stations on the shore of Cook Strait will be located, and reconnaissance made for the extension of the triangulation over the northern portion of the South Island. Observations will be continued to link up the Kaingaroa and Wairarapa bases.

Precise Levelling.—It is proposed to scheme out the lines over which this work will be done, and, if possible, fundamental bench-marks will be established at the junction of the meshes and at suitable intervals along the lines.

Minor Triangulation.—A revision of a small area of work found faulty is to be undertaken, otherwise no new work is proposed, although it will probably be necessary to take up this work to control settlement areas.

Topographical Surveys.—The contoured topographical survey is to be continued in the Auckland and Taranaki Districts, and it is proposed to take up further work of this description during next season.

Standard Surveys.—The Auckland city and suburban survey is being continued, and Invercargill will be completed. Rural work in Taranaki, Marlborough, and Canterbury is to be continued, and it is proposed to commence new surveys in Gisborne, Wellington, and Southland Districts.

Town-section Surveys.—Small areas for town subdivisions are to be put in hand in various districts.

Rural Settlement.—It is anticipated that besides the work in sight (about 80,000 acres) considerable further areas will be made available for survey under the Land for Settlements Act.

Native Land Court Surveys.—Authority for the survey of 68,000 acres of Native land is in hand at the beginning of the year.

Office-work.—The routine examination and recording of plans, field inspections, photo-lithographic drawings, and the computations in connection with the geodetic, magnetic, and tidal surveys will be continued in addition to the above field-work. The recomputation and adjustment of minor triangulation in the Bay of Plenty and Poverty Bay circuits is also to be commenced.

GENERAL.

Map-publication.—In the Chief Draughtsman's report, appended hereto, will be found details of the maps published during the year.

It is again to be deplored that the standard maps on 1-mile-to-1-inch scale are falling into arrears, and it will be necessary to speed up the publication of these during the coming year.

Town Subdivisional Schemes.—Although the number of the schemes show a falling-off, the total area was almost exactly the same as last year. An analysis of the number submitted by the various districts, and of their division into classified areas, is given in the Chief Draughtsman's report.

Proclamation of Roads, &c.—During the year under review a number of applications for the proclamation of road-lines laid out under sections 48, 49, 50, and 52 of the Native Land Amendment Act, 1913, were considered and dealt with. The statutory notices under section 15 of the Native Land Amendment Act, 1914, were forwarded to the local authorities of the districts concerned, and in the majority of cases no objections were raised to the proclamation of the road-lines as public highways.