

TABLE SHOWING THE RATE OF SECULAR CHANGE AT SEVEN STATIONS IN THE NORTH ISLAND.

*I. Inclination.*

| Station.           | Date.                | Inclination.           | Interval,<br>Years. | Total Change. | Rate of Change<br>per Annum. |
|--------------------|----------------------|------------------------|---------------------|---------------|------------------------------|
| Mount Victoria ... | { 1899-96<br>1902-69 | { 65 26·88<br>65 32·45 | 2·73                | + 5·57        | + 2·04                       |
| Petone ...         | { 1899-97<br>1902-69 | { 65 22·73<br>65 26·67 | 2·72                | + 3·94        | + 1·44                       |
| Opotiki ...        | { 1901-15<br>1903-00 | { 62 06·18<br>62 08·36 | 1·85                | + 2·18        | + 1·18                       |
| Rotorua ...        | { 1901-13<br>1903-11 | { 62 32·47<br>62 35·25 | 1·98                | + 2·78        | + 1·41                       |
| Te Awamutu ...     | { 1900-80<br>1903-21 | { 62 28·05<br>62 31·52 | 2·41                | + 3·47        | + 1·44                       |
| Levin ...          | { 1900-63<br>1903-26 | { 64 48·25<br>64 55·43 | 2·63                | + 7·18        | + 2·73                       |
| Somes Island ...   | { 1899-97<br>1903-27 | { 65 23·47<br>65 32·05 | 3·30                | + 8·58        | + 2·61                       |
| Totals ...         | ...                  | ...                    | 17·62               | + 33·70       | ...                          |

Deduced value of secular variation of inclination per annum, + 1·91'.

*II. Horizontal Force.*

| Station.           | Date.                | Horizontal<br>Force:<br>C.g.s. Units. | Interval,<br>Years. | Total Change. | Rate of Change per<br>Annum:<br>C.g.s. Units. |
|--------------------|----------------------|---------------------------------------|---------------------|---------------|-----------------------------------------------|
| Mount Victoria ... | { 1899-96<br>1902-69 | { 0·24210<br>0·24157                  | 2·73                | — 0·00053     | — 0·00019                                     |
| Petone ...         | { 1899-97<br>1902-69 | { 0·24265<br>0·24224                  | 2·72                | — 0·00041     | — 0·00018                                     |
| Opotiki ...        | { 1901-15<br>1903-00 | { 0·26225<br>0·26196                  | 1·85                | — 0·00029     | — 0·00016                                     |
| Rotorua ...        | { 1901-13<br>1903-11 | { 0·25898<br>0·25890                  | 1·98                | — 0·00008     | — 0·00004                                     |
| Te Awamutu ...     | { 1900-80<br>1903-21 | { 0·26098<br>0·26035                  | 2·41                | — 0·00063     | — 0·00026                                     |
| Levin ...          | { 1900-63<br>1903-26 | { 0·24634<br>0·24532                  | 2·63                | — 0·00102     | — 0·00039                                     |
| Somes Island ...   | { 1899-97<br>1903-27 | { 0·24241<br>0·24185                  | 3·30                | — 0·00056     | — 0·00017                                     |
| Totals ...         | ...                  | ...                                   | 17·62               | — 0·00352     | ...                                           |

Deduced value of secular variation of horizontal force, — 0·00020 c.g.s. units per annum.

*III. Declination.*

| Station.           | Date.                | Declination.            | Interval,<br>Years. | Total Change. | Rate of Change<br>per Annum. |
|--------------------|----------------------|-------------------------|---------------------|---------------|------------------------------|
| Mount Victoria ... | { 1899-96<br>1902-69 | { 15 38·3 E.<br>15 46·6 | 2·73                | + 08·3        | + 3·0                        |
| Petone ...         | { 1899-97<br>1902-69 | { 15 35·8<br>15 48·2    | 2·72                | + 12·4        | + 4·6                        |
| Opotiki ...        | { 1901-15<br>1903-00 | { 14 44·3<br>14 48·0    | 1·85                | + 03·7        | + 2·0                        |
| Rotorua ...        | { 1901-13<br>1903-11 | { 14 19·0<br>14 21·1    | 1·98                | + 02·1        | + 1·0                        |
| Te Awamutu ...     | { 1900-80<br>1903-21 | { 14 58·8<br>15 08·2    | 2·41                | + 09·4        | + 3·9                        |
| Levin ...          | { 1900-63<br>1903-26 | { 15 29·5<br>15 37·6    | 2·63                | + 08·1        | + 3·1                        |
| Somes Island ...   | { 1899-97<br>1903-27 | { 15 35·3<br>15 45·7    | 3·30                | + 10·4        | + 3·2                        |
| Totals ...         | ...                  | ...                     | 17·62               | + 54·4        | ...                          |

Deduced value of secular variation of magnetic declination, + 03·1' per annum.