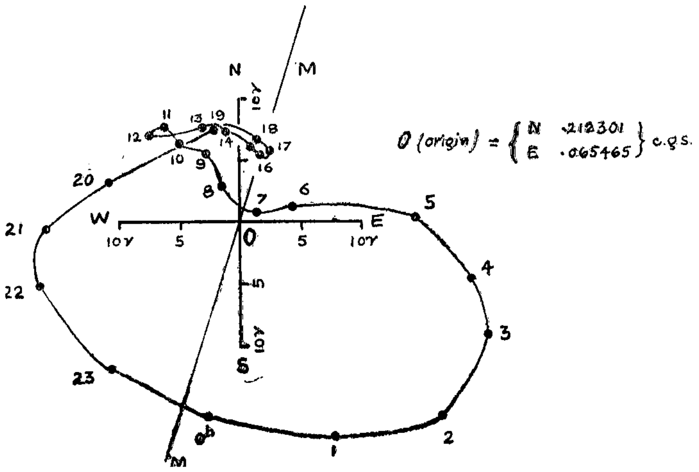
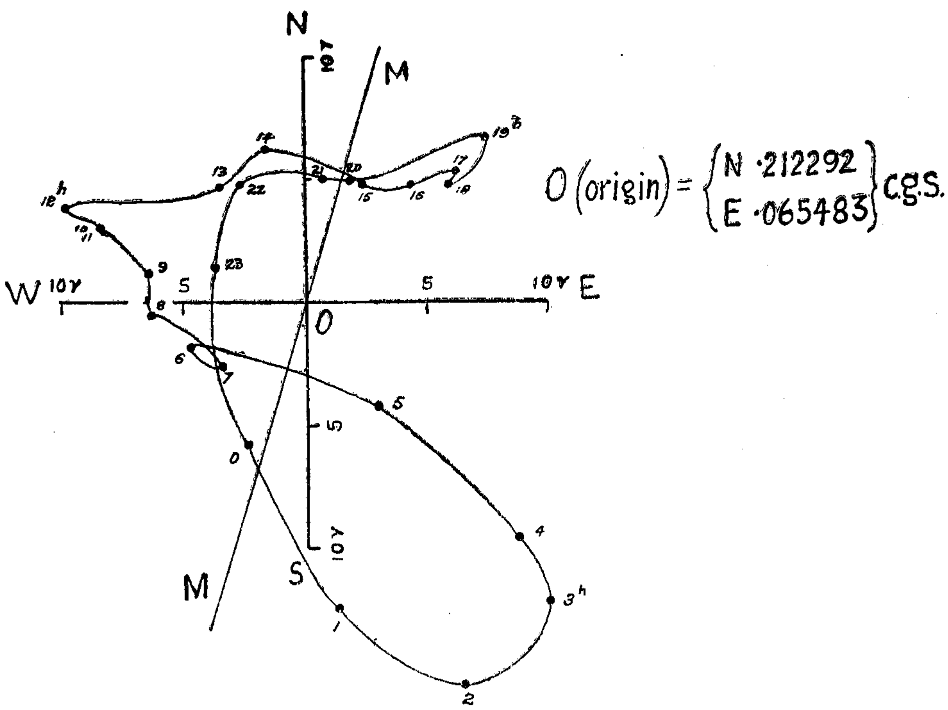
$+ \frac{1}{4}(1{\cdot}17) = 7{\cdot}30 + 1{\cdot}51 + 0{\cdot}66 + 0{\cdot}29 = 9{\cdot}76\gamma$, which is, within the range of arithmetical error, the value of P_1 for equinoctial months. It must be remembered that the summer data is from two intervals of two months each, ten months apart; and that the two equinoctical intervals are six months apart, and really the two winter intervals two months apart, and this division is important.

In magnetic declination the outstanding feature is the large range in the diurnal wave P_1 in winter. In the summer months A_1 and A_2 are not greatly different, but in the winter months they differ by about 158°, so that the phase difference of diurnal and semidiurnal effect changes by 175° between the two seasons, and this accounts for a large part of the difference between summer and winter vector diagrams of the diurnal horizontal disturbing forces.



VECTOR DIAGRAM: MEAN DIURNAL HORIZONTAL DISTURBING FORCES, FOR YEAR 1922 (ALL DAYS) AT CHRISTCHURCH.

Greenwich hours indicated: NS = geographical meridian. MM = magnetic meridian.



VECTOR DIAGRAM FOR WINTER MONTHS, 1922.