

NOTES

OBITUARY.

It is with great regret that we record the death, on November 2, 1897, of the Director of the Gauss Magnetic Observatory, Ernst Schering, Professor of Mathematics at the University of Göttingen. A notice of Professor Schering's papers on terrestrial magnetism will appear later.

THE MAGNETIC "VARIATION" AND DIP FOR THE YEAR 1897.

The JOURNAL has received from Mr. G. W. Littlehales a copy of his recent chart giving the isogonic and isoclinic lines over the entire earth for the year 1897. This finely executed magnetic chart, 113 × 58 cm. in size, is published by the United States Hydrographic Office and sold for fifty cents. For the purpose of reducing old data to date of chart, Mr. Littlehales makes use of the many secular variation formulæ deduced by him, notices of which have already appeared in the JOURNAL. We trust that he will be able at no distant day, to publish likewise the data upon which his chart is based.

THE MEAN VALUES OF THE MAGNETIC DECLINATION FOR PARALLELS OF LATITUDE.

Dr. van Bemmelen in a recent paper¹ has inadvertently misquoted a conclusion reached by me some time ago with regard to this subject. He says: "Dr. Bauer (*Am. Jour. of Science*, Vol. I, 1895, p. 111) has computed the values of the mean declination for the period 1780-1885, and finds that they are invariably positive. Again he finds that the values vary with latitude, but that the variation is too small to permit the drawing of any definite conclusion. I, however, find just the reverse: positive and negative values of the mean declination and a typical change with latitude; viz., a decrease [beginning with 70° N.] until a low northerly latitude is reached; then an increase up to high southerly latitudes, followed by a decrease again."

As a matter of fact, Dr. van Bemmelen's conclusions are a confirmation of my own, not a contradiction, as will be seen below. On p. 113, I give the following conclusion among others: "The mean declination along a parallel of latitude is always westerly [positive], the minimum occurring near the equator; the quantities, in general, increase upon leaving the equator."

Below will be found a tabular presentation of our respective values of the mean declination. Table II is taken directly from my publication cited by Dr. van Bemmelen, and it will be noticed that for *every one* of the years given the figures reveal the characteristic change with latitude.

¹ Werte der erdmagnetischen Declination für die Periode 1500-1700, etc. [Cf. p. 162.]

TABLE I

Van Bemmelen's values of the mean magnetic declination for parallels of latitude.

Year	70° N	60°	50°	40°	30°	20°	10°	Equa- tor	10°	20°	30°	40°	50°	60°	Antarctic Circle
1600	8.0 W	3.4 W	1.1 W	0.1 E	1.1 E	1.4 E	1.2 E	0.3 E	0.4 W	0.3 W	0.2 E	0.7 E	1.5 E	2.0 E	
1650	8.5	4.1	2.1	0.5 W	0.1 W	0.0	0.1 W	0.4 W	0.8	1.0	1.0 W	1.2 W	0.7 W	1.3 E	
1700	9.4 W	5.1	2.9	0.7	0.2	0.4 W	0.6	0.6	0.7	1.2	1.3	1.3	0.8	0.6 E	
1770		2.4	1.2	0.4	0.4	0.3	0.3	0.5	0.8	1.0	1.5	2.3	2.5	3.4 W	3.1 W
1812½		2.8	1.7	1.2	0.5	0.5	0.5	0.8	1.2	1.5	2.0	2.3	2.4	2.4	1.4
1885		3.0 W	1.4 W	0.6 W	0.4 W	0.5 W	0.6 W	0.9 W	1.2 W	1.8 W	2.6 W	3.5 W	4.0 W	4.0 W	3.5 W

TABLE II

Bauer's values of the mean magnetic declination for parallels of latitude.

Year	60° N	40°	20°	Equa- tor	20°	40°	60° S	Mean
1780	2.2 W	1.1 W	0.5 W	0.5 W	1.1 W	2.3 W	2.8 W	1.5 W
1830	2.0	0.7	0.3	0.5	1.3	2.7	1.4	1.3
1842	3.0	1.0	0.2	0.2	1.4	3.0	2.1	1.6
1858	3.7	1.0	0.3	0.7	1.6	3.2	2.4	1.8
1872	3.1	0.7	0.2	0.8	2.0	3.3	3.2	1.9
1880	2.0	0.8	0.4	0.9	1.8	3.4	3.5	1.8
1885	2.5 W	0.7 W	0.4 W	1.0 W	1.8 W	3.5 W	4.1 W	2.0 W
Mean	2.6 W	0.9 W	0.3 W	0.7 W	1.6 W	3.2 W	2.8 W	1.7 W

With regard to the signs of the mean values, *i. e.* whether westerly or easterly, it will be noticed that all the values in Table II are westerly, and that in Table I some easterly values occur for the years 1600, 1650, and 1700. It is not possible at present to say how much reliance is to be put upon the early values, especially as they are of but small magnitude. For example, I obtained some easterly values from van Bemmelen's first magnetic charts for latitudes, which now give westerly values, as resulting from his later work.

A word might be said with regard to the value of such investigations. Of course, neither Dr. van Bemmelen nor myself desire to attach any other value to our results than a *statistical* one. Terrestrial magnetism is far from being able to dispense with such statistical work. In too many instances is this method the only one by which we can hope to improve the empirical basis upon which our theoretical investigations must at present rest.