

namely,  $1.04$ , is the quotient of  $360^\circ$  divided by twice the time interval between epochs of maximum and minimum declination. How closely the formula represents the existing data is seen from the next table.

TABLE VIII.

*Comparison between observed and computed values of the magnetic declination at Baltimore*

Date.	Obs'd D.	Weight.	Comp'd D.	C.—O.	Date.	Obs'd D.	Weight.	Comp'd D.	C.—O.
1640.5	$+9^\circ.00$	$\frac{1}{4}$	$+5^\circ.28$	$-3^\circ.72$	1780.5	$+0^\circ.77$	1	$+1^\circ.02$	$+0^\circ.25$
1679.0	5.25	$\frac{1}{2}$	6.07	$+0.82$	1787.5	0.37	1	0.82	$+0.45$
1683.5	6.25	1	6.01	$-0.24$	1808.5	0.21	1	0.70	$+0.49$
1703.5	5.12	1	5.38	$+0.26$	1840.7	2.27	1	1.81	$-0.46$
1720.5	4.21	1	4.47	$+0.26$	1847.3	2.31	1	2.18	$-0.13$
1729.2	4.02	1	3.92	$-0.10$	1856.7	2.49	1	2.77	$+0.28$
1754.5	2.28	1	2.27	$-0.01$	1875.5	3.74	1	4.01	$+0.27$
1756.9	2.88	1	2.13	$-0.75$	1877.8	4.18	1	4.16	$-0.02$
1771.0	1.11	1	1.39	$+0.28$	1885.6	4.49	1	4.64	$+0.15$
1776.1	$+1.75$	1	$+1.17$	$-0.58$	1895.7	$+5.34$	1	$+5.19$	$-0.15$

Fig. No. 6 gives a graphical representation of the formula and of the observed values as indicated by the dots. The formula must not be regarded as actually representing the real law governing the secular variation, but simply as a mathematical approximation to the law. On the other hand, the differences between values computed from formula and the observed values must not be regarded as representing in every instance a real fact. The observations, especially the older ones, are themselves more or less defective. The formula should not be used for many years before or after the extreme dates of the series of observations.

The time when the maximum or minimum declination is reached and N. W. of it. These surveys were made by order of the Baltimore County Circuit Court in consequence of disputed land boundaries. Other values Mr. Kelbaugh copied from the record books of the county surveyor and his assistants, between 1805 and 1825."—C. and G. S. Report, 1888, p. 215.

These 52 different values were carefully scrutinized by Mr. Schott and finally combined to 12 mean results, as given in the above table, Nos. 2-14 and No. 17. To these several differences Mr. Schott added the respective values adopted by him for the declination at the time of the resurvey, as resulting from his 1877 formula.