XLVII. Supplementary table for computing the precession and nutation of the fixed stars

F. Baily Esq. F.R.S. L.S.

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14' 2'', the correct difference of altitude resulting from observations at five different stations, $64\frac{1}{2}$ feet. The true angular difference is consequently 2' 36''; the refraction at Ingleborough $\frac{1}{16}$; and at Great Whernside $\frac{1}{13}$.

X. X.

[To be continued.]

XLVII. *Supplementary Table for computing the Precession and Nutation of the Fixed Stars.* By F. BAILY, Esq. F.R.S. and L.S.

To the Editors of the Philosophical Magazine and Journal.

IN your Magazine for October last, I alluded to some new tables of Aberration and Nutation which had been computed under the direction of M. Schumacher, and inserted by him in his *Astronomische Hülftafeln* for 1822. Tables for the computation of those quantities are of constant use to the practical astronomer: but, it must be evident, to those who are acquainted with the principles on which M. Schumacher's tables are constructed, that the values denominated A and B (which are confined to the Precession and Nutation) require to be calculated every year. M. Schumacher, however, has given them only for the years 1819–1822; which renders the general tables, to which they refer, of little or no use at the present time.

In order to remedy this temporary defect, I have computed (for my own use) the logarithms of A and B for the years 1823 and 1824: and as they may probably be of service to some of your readers, and perhaps render the adoption of M. Schumacher's tables more general, I have sent them for insertion in your Magazine. I should remark that, in the value of B, I have included the quantity denoted by $+08768 \cos 2 \vartheta$, in order that the total result may accord with those deduced from the rigorous formula given by M. Bessel.

I am, gentlemen,

Your obedient servant,

March 19, 1823.

FRANCIS BAILY.

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Day.	1823.		1824.	
	Log. A.	Log. B.	Log. A.	Log. B.
January 0	9.4314	0.7042 _n	9.5104	0.3924 _n
10	9.4876	0.7075 _n	9.5567	0.3969 _n
20	9.5331	0.7152 _n	9.5958	0.4103 _n
30	9.5735	0.7257 _n	9.6290	0.4292 _n
February 9	9.6057	0.7368 _n	9.6568	0.4489 _n
19	9.6326	0.7465 _n	9.6797	0.4657 _n
March 1	9.6553	0.7532 _n	9.6994	0.4765 _n
11	9.6750	0.7555 _n	9.7165	0.4791 _n
21	9.6931	0.7529 _n	9.7322	0.4722 _n
31	9.7105	0.7449 _n	9.7474	0.4549 _n
April 10	9.7278	0.7318 _n	9.7630	0.4267 _n
20	9.7466	0.7136 _n	9.7793	0.3875 _n
30	9.7670	0.6919 _n	9.7969	0.3378 _n
May 10	9.7878	0.6695 _n	9.8156	0.2832 _n
20	9.8096	0.6436 _n	9.8356	0.2142 _n
30	9.8322	0.6209 _n	9.8561	0.1472 _n
June 9	9.8547	0.6022 _n	9.8770	0.0852 _n
19	9.8768	0.5893 _n	9.8975	0.0367 _n
29	9.8980	0.5831 _n	9.9171	0.0101 _n
July 9	9.9178	0.5839 _n	9.9356	0.0081 _n
19	9.9353	0.5906 _n	9.9526	0.0286 _n
29	9.9515	0.6011 _n	9.9677	0.0626 _n
August 8	9.9658	0.6136 _n	9.9811	0.1014 _n
18	9.9784	0.6257 _n	9.9928	0.1371 _n
28	9.9893	0.6354 _n	0.0029	0.1454 _n
September 7	9.9985	0.6416 _n	0.0119	0.1794 _n
17	0.0077	0.6412 _n	0.0200	0.1757 _n
27	0.0187	0.6348 _n	0.0303	0.1542 _n
October 7	0.0243	0.6214 _n	0.0353	0.1096 _n
17	0.0329	0.6010 _n	0.0434	0.0362 _n
27	0.0424	0.5855 _n	0.0522	9.9235 _n
November 6	0.0525	0.5414 _n	0.0617	9.7485 _n
16	0.0637	0.5053 _n	0.0723	9.4422 _n
26	0.0757	0.4687 _n	0.0837	8.0864 _n
December 6	0.0883	0.4354 _n	0.0957	9.3233
16	0.0999	0.4149 _n	0.1067	9.5345
26	0.1133	0.3940 _n	0.1196	9.6726
36	0.1263	0.3920 _n	0.1321	9.6882
$k =$	-1.451		-1.693 -0.693	