

Note regarding B(gauss/amp): The units are gauss per amp because these readings are taken when $i=1$ A. This must be taken into account to keep units consistent.

Note re Δx : Because B changes between x-values changes we can't use a simple average times the length. We must evaluate each piece on its own interval.
(We convert to meters for correct units on Verdet constant.)

Note re B[Tesla/amp]: Here we take the average of the two sides of the interval in order to eliminate errors in adding one side (which wouldn't matter if the tube was symmetrical about the magnetic field, but one side "sticks out").

Note re liquid column starts here: Because we are adding up the intervals, the value at this point corresponds to the interval from 18-20 and is outside our range.

Integral(B)dl [Tesla meters/amp] (summing intervals from 22 to 566 mm) 8.887E-03

x [mm]	B [gauss/amp]	Δx [m]	B [Tesla/amp]	$\Delta x \cdot B$ [m Tesla/amp]
0.0	37.11			
2.0	40.92	0.002	0.003902	
4.0	45.09	0.002	0.004301	
6.0	50.03	0.002	0.004756	
8.0	55.11	0.002	0.005257	
10.0	60.86	0.002	0.005799	
12.0	67.16	0.002	0.006401	
14.0	73.76	0.002	0.007046	
16.0	80.82	0.002	0.007729	
18.0	88.59	0.002	0.008471	
20.0	95.88	0.002	0.009224	<----Liquid Column Starts Here
22.0	103.29	0.002	0.009959	1.992E-05
24.0	110.65	0.002	0.010697	2.139E-05
26.0	117.09	0.002	0.011387	2.277E-05
28.0	123.32	0.002	0.012021	2.404E-05
30.0	128.91	0.002	0.012612	2.522E-05
32.0	133.74	0.002	0.013133	2.627E-05
34.0	138.47	0.002	0.013611	2.722E-05
36.0	142.53	0.002	0.014050	2.810E-05
38.0	146.09	0.002	0.014431	2.886E-05
40.0	149.33	0.002	0.014771	2.954E-05
42.0	151.99	0.002	0.015066	3.013E-05
44.0	154.76	0.002	0.015338	3.068E-05
46.0	157.03	0.002	0.015590	3.118E-05
48.0	159.00	0.002	0.015802	3.160E-05
50.0	160.91	0.002	0.015996	3.199E-05
52.0	162.52	0.002	0.016172	3.234E-05
54.0	164.00	0.002	0.016326	3.265E-05
56.0	165.42	0.002	0.016471	3.294E-05
58.0	166.60	0.002	0.016601	3.320E-05
60.0	167.74	0.002	0.016717	3.343E-05
62.0	168.84	0.002	0.016829	3.366E-05
64.0	169.71	0.002	0.016928	3.386E-05
66.0	170.56	0.002	0.017014	3.403E-05
68.0	171.32	0.002	0.017094	3.419E-05
70.0	172.04	0.002	0.017168	3.434E-05
75.0	173.56	0.005	0.017280	8.640E-05
80.0	174.77	0.005	0.017417	8.708E-05
85.0	175.75	0.005	0.017526	8.763E-05
90.0	176.55	0.005	0.017615	8.808E-05

95.0	177.24	0.005	0.017690	8.845E-05
100.0	177.87	0.005	0.017756	8.878E-05
105.0	178.49	0.005	0.017818	8.909E-05
110.0	179.07	0.005	0.017878	8.939E-05
115.0	179.60	0.005	0.017934	8.967E-05
120.0	180.07	0.005	0.017984	8.992E-05
125.0	180.47	0.005	0.018027	9.014E-05
130.0	180.78	0.005	0.018063	9.031E-05
135.0	181.00	0.005	0.018089	9.045E-05
140.0	181.19	0.005	0.018110	9.055E-05
145.0	181.33	0.005	0.018126	9.063E-05
150.0	181.49	0.005	0.018141	9.071E-05
160.0	181.87	0.010	0.018168	1.817E-04
170.0	182.23	0.010	0.018205	1.821E-04
180.0	182.51	0.010	0.018237	1.824E-04
190.0	182.76	0.010	0.018264	1.826E-04
200.0	182.93	0.010	0.018285	1.828E-04
210.0	183.11	0.010	0.018302	1.830E-04
220.0	183.36	0.010	0.018324	1.832E-04
230.0	183.57	0.010	0.018347	1.835E-04
240.0	183.73	0.010	0.018365	1.837E-04
250.0	183.83	0.010	0.018378	1.838E-04
260.0	183.73	0.010	0.018378	1.838E-04
270.0	183.62	0.010	0.018368	1.837E-04
280.0	183.62	0.010	0.018362	1.836E-04
290.0	183.67	0.010	0.018365	1.836E-04
300.0	183.72	0.010	0.018370	1.837E-04
310.0	183.66	0.010	0.018369	1.837E-04
320.0	183.53	0.010	0.018360	1.836E-04
330.0	183.38	0.010	0.018346	1.835E-04
340.0	183.23	0.010	0.018331	1.833E-04
350.0	183.09	0.010	0.018316	1.832E-04
360.0	182.87	0.010	0.018298	1.830E-04
370.0	182.62	0.010	0.018275	1.827E-04
380.0	182.41	0.010	0.018252	1.825E-04
390.0	182.24	0.010	0.018233	1.823E-04
400.0	181.95	0.010	0.018210	1.821E-04
405.0	181.80	0.005	0.018188	9.094E-05
410.0	181.55	0.005	0.018168	9.084E-05
415.0	181.24	0.005	0.018140	9.070E-05
420.0	180.91	0.005	0.018108	9.054E-05
425.0	180.58	0.005	0.018075	9.037E-05
430.0	180.25	0.005	0.018042	9.021E-05
435.0	179.85	0.005	0.018005	9.003E-05
440.0	179.38	0.005	0.017962	8.981E-05
445.0	178.76	0.005	0.017907	8.954E-05
450.0	177.96	0.005	0.017836	8.918E-05
455.0	176.96	0.005	0.017746	8.873E-05
460.0	175.74	0.005	0.017635	8.818E-05
465.0	174.28	0.005	0.017501	8.751E-05
470.0	172.49	0.005	0.017339	8.669E-05
475.0	170.31	0.005	0.017140	8.570E-05
480.0	167.49	0.005	0.016890	8.445E-05

482.0	166.32	0.002	0.016691	3.338E-05	
484.0	164.85	0.002	0.016559	3.312E-05	
486.0	163.27	0.002	0.016406	3.281E-05	
488.0	161.41	0.002	0.016234	3.247E-05	
490.0	159.50	0.002	0.016046	3.209E-05	
492.0	157.19	0.002	0.015835	3.167E-05	
494.0	154.74	0.002	0.015597	3.119E-05	
496.0	152.01	0.002	0.015338	3.068E-05	
498.0	148.90	0.002	0.015046	3.009E-05	
500.0	145.47	0.002	0.014719	2.944E-05	
502.0	141.73	0.002	0.014360	2.872E-05	
504.0	137.28	0.002	0.013951	2.790E-05	
506.0	132.50	0.002	0.013489	2.698E-05	
508.0	127.23	0.002	0.012987	2.597E-05	
510.0	121.51	0.002	0.012437	2.487E-05	
512.0	114.92	0.002	0.011822	2.364E-05	
514.0	107.61	0.002	0.011127	2.225E-05	
516.0	100.00	0.002	0.010381	2.076E-05	
518.0	92.39	0.002	0.009620	1.924E-05	
520.0	85.05	0.002	0.008872	1.774E-05	
522.0	77.80	0.002	0.008143	1.629E-05	
524.0	70.61	0.002	0.007421	1.484E-05	
526.0	63.91	0.002	0.006726	1.345E-05	
528.0	57.50	0.002	0.006071	1.214E-05	
530.0	52.33	0.002	0.005492	1.098E-05	
532.0	47.34	0.002	0.004984	9.967E-06	
534.0	42.99	0.002	0.004517	9.033E-06	
536.0	39.06	0.002	0.004103	8.205E-06	
538.0	35.33	0.002	0.003720	7.439E-06	
540.0	32.25	0.002	0.003379	6.758E-06	
542.0	29.51	0.002	0.003088	6.176E-06	
544.0	26.94	0.002	0.002823	5.645E-06	
546.0	24.77	0.002	0.002586	5.171E-06	
548.0	22.74	0.002	0.002376	4.751E-06	
550.0	20.99	0.002	0.002187	4.373E-06	
552.0	19.45	0.002	0.002022	4.044E-06	
554.0	17.90	0.002	0.001868	3.735E-06	
556.0	16.65	0.002	0.001728	3.455E-06	
558.0	15.48	0.002	0.001607	3.213E-06	
560.0	14.43	0.002	0.001496	2.991E-06	
562.0	13.44	0.002	0.001394	2.787E-06	
564.0	12.56	0.002	0.001300	2.600E-06	
566.0	11.77	0.002	0.001217	2.433E-06	<----Liquid Column Ends Here
568.0	11.01	0.002	0.001139		
570.0	10.36	0.002	0.001069		
572.0	9.72	0.002	0.001004		
574.0	9.16	0.002	0.000944		
576.0	8.62	0.002	0.000889		
578.0	8.16	0.002	0.000839		
580.0	7.69	0.002	0.000793		