

Errata to
“The effect of an axial temperature gradient on
the steady motion of a large droplet in a tube”
by S. K. Wilson
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Since this paper was published, two minor inaccuracies in it have come to light. Firstly, a failure to continue the numerical solution of Equation (50) to sufficiently large values of Z means that the numerically-calculated values in Table 1 are not accurate to all the significant figures shown. The correct values are given below. Note that the differences from the published results are small (no more than approximately 2% in the worst case), disappear in the limit $S \rightarrow \infty$ and are not discernable on the scale of Figure 2. Secondly, the factor $(1 + S)^{\frac{1}{3}}$ was mistakenly replaced by unity in the exponents in Equations (51) and (59). Thus Equation (51) should be

$$H(Z) \sim 1 + \alpha e^{(1+S)^{\frac{1}{3}} Z}$$

with a similar modification to Equation (59). Note that neither of these mistakes affects any of the other results in this paper.

Table 1. Revised values of \bar{M} , C_0 , \hat{h}_∞ and \hat{W} for a range of values of S .

S	\bar{M}	C_0	\hat{h}_∞	\hat{W}
10^{-4}	7.475×10^{-5}	0.6431	1.338	2.676
10^{-3}	7.465×10^{-4}	0.6440	1.340	2.681
10^{-2}	7.361×10^{-3}	0.6531	1.358	2.730
10^{-1}	6.493×10^{-2}	0.7404	1.540	3.234
1	0.3326	1.445	3.007	9.020
10	0.8789	5.470	11.38	136.5
10^2	1.940	24.78	51.55	5259
10^3	4.189	114.8	238.7	2.392×10^5
10^4	9.028	532.5	1108	1.108×10^7
10^5	19.45	2472	5141	5.142×10^8
10^6	41.90	1.147×10^4	2.386×10^4	2.386×10^{10}
10^7	90.28	5.325×10^4	1.108×10^5	1.108×10^{12}
10^8	194.5	2.472×10^5	5.141×10^5	5.141×10^{13}