

CORRIGENDUM

'The inertial lift on a rigid sphere in a linear shear flow field near a flat wall'
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The integral I was computed incorrectly for the case of a freely rotating sphere. This affects tables 3 and 4 of the paper. The corrected tables are given below. The correct form of equation (4.2) is

$$I = [1.7669 + 0.2885\kappa - 0.90250\kappa^2 + 0.507625\kappa^3] \\ - \left[\frac{3.2415}{\kappa} + 2.6729 + 0.8373\kappa - 0.4683\kappa^2 \right] \Lambda_G \\ + [1.8065 + 0.89934\kappa - 1.961\kappa^2 + 1.02161\kappa^3] \Lambda_G^2 .$$

We wish to thank Prof. D.T. Leighton and Mr Gokul Krishnan for pointing the mistake out to us.

l/a	$\Lambda_G = 0.01$	0.1	0.5	1.0
1.1	1.598	1.021	-1.198	-3.175
1.5	1.633	0.939	-1.777	-4.340
2.0	1.653	0.820	-2.509	-5.820
3.0	1.652	0.535	-4.052	-8.918
4.0	1.630	0.225	-5.639	-12.104
5.0	1.600	-0.931	-7.245	-15.297
10.0	1.435	-1.711	-15.329	-31.507
20.0	1.104	-4.956	-31.530	-63.917

l/a	$\Lambda_G = 1.5$	2.0	3.0	4.0	5.0
1.1	-4.268	-4.470	-2.230	3.546	12.868
1.5	-5.985	-6.707	-5.396	-0.406	8.268
2.0	-8.187	-9.595	-9.600	-5.842	1.710
3.0	-12.823	-15.767	-18.771	-17.923	-13.230
4.0	-17.606	-22.146	-28.339	-30.678	-29.166
5.0	-22.439	-28.098	-38.038	-43.643	-45.409
6.0	-27.288	-35.075	-47.781	-56.669	-61.739
10.0	-46.745	-61.043	-86.819	-108.844	-127.103
20.0	-95.381	-125.925	-184.238	-238.871	-289.804

Table 3: The integral, I , for a rotating sphere ($\Lambda_G > 0$).

l/a	$\Lambda_G = -0.01$	-0.1	-0.5	-1.0	-1.5
1.1	1.731	2.336	5.412	10.044	15.563
1.5	1.789	2.518	6.116	11.442	17.689
2.0	1.841	2.711	6.948	13.094	20.186
3.0	1.904	3.059	8.569	16.325	25.040
4.0	1.946	3.389	10.178	19.531	29.846
5.0	1.981	3.712	11.785	22.739	34.651
10.0	2.139	5.323	19.843	38.838	58.774
20.0	2.455	8.052	36.011	71.166	107.242

l/a	$\Lambda_G = -2.0$	-3.0	-4.0	-5.0
1.1	21.965	37.427	56.429	78.971
1.5	24.856	41.951	62.728	87.185
2.0	28.223	47.137	69.825	96.293
3.0	34.718	56.958	83.046	112.982
4.0	41.124	66.569	95.863	129.007
5.0	48.023	76.147	108.098	144.890
10.0	79.648	124.215	172.542	224.625
20.0	144.242	221.008	301.463	385.610

Table 4: The integral, I , for a rotating sphere ($\Lambda_G < 0$).