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Motion of a spherical particle in a rarefied gas
Part 2. Drag and thermal polarization.

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Appendix. Below the tables for functions f_V^i from eq.(20), f_T^i from eq.(24)

and f_A^i from eq.(31) at some Kn number values are given

R	f_V^1	f_V^2	f_V^3	f_V^4	f_V^5	f_V^6	f_V^7	f_V^8	f_V^9	f_V^{10}
0.050	0.9683	-0.3591	-0.7608	0.2824	0.2900(-1)	0.1990(-2)	-0.1333	0.3321(-1)	-0.2800(-2)	-0.7861
0.075	0.9795	-0.3580	-0.7544	0.2816	0.2599(-1)	0.2921(-2)	-0.1293	0.3214(-1)	-0.5419(-2)	-0.7864
0.10	0.9698	-0.3565	-0.7474	0.2806	0.2305(-1)	0.3825(-2)	-0.1253	0.3107(-1)	-0.8410(-2)	-0.7867
0.25	0.9068	-0.3445	-0.7010	0.2718	0.6948(-2)	0.8826(-2)	-0.1022	0.2480(-1)	-0.2991(-1)	-0.7883
0.50	0.8061	-0.3219	-0.6262	0.2551	-0.1478(-1)	0.1591(-1)	-0.6955(-1)	0.1544(-1)	-0.6887(-1)	-0.7905
0.75	0.7200	-0.3009	-0.5618	0.2392	-0.3141(-1)	0.2180(-1)	-0.4370(-1)	0.7486(-2)	-0.1064	-0.7926
1.00	0.6480	-0.2822	-0.5078	0.2251	-0.4422(-1)	0.2676(-1)	-0.2325(-1)	0.7220(-3)	-0.1411	-0.7946
1.25	0.5877	-0.2658	-0.4624	0.2127	-0.5415(-1)	0.3098(-1)	-0.6969(-2)	-0.5063(-2)	-0.1731	-0.7966
1.50	0.5368	-0.2513	-0.4240	0.2017	-0.6198(-1)	0.3460(-1)	0.6105(-2)	-0.1005(-1)	-0.2026	-0.7986
1.75	0.4934	-0.2386	-0.3912	0.1919	-0.6794(-1)	0.3773(-1)	0.1668(-1)	-0.1437(-1)	-0.2298	-0.8006
2.0	0.4562	-0.2272	-0.3629	0.1833	-0.7268(-1)	0.4044(-1)	0.2528(-1)	-0.1813(-1)	-0.2550	-0.8025
2.5	0.3958	-0.2078	-0.3168	0.1685	-0.7926(-1)	0.4485(-1)	0.3811(-1)	-0.2433(-1)	-0.3005	-0.8063
3.0	0.3490	-0.1919	-0.2810	0.1562	-0.8316(-1)	0.4821(-1)	0.4681(-1)	-0.2914(-1)	-0.3405	-0.8098
4.0	0.2817	-0.1672	-0.2291	0.1371	-0.8625(-1)	0.5268(-1)	0.5677(-1)	-0.3586(-1)	-0.4079	-0.8163
5.0	0.2359	-0.1487	-0.1933	0.1227	-0.8596(-1)	0.5510(-1)	0.6114(-1)	-0.3997(-1)	-0.4629	-0.8220
6.0	0.2028	-0.1341	-0.1673	0.1113	-0.8408(-1)	0.5621(-1)	0.6262(-1)	-0.4241(-1)	-0.5088	-0.8269
7.0	0.1778	-0.1223	-0.1475	0.1020	-0.8145(-1)	0.5645(-1)	0.6253(-1)	-0.4374(-1)	-0.5477	-0.8312
8.0	0.1582	-0.1125	-0.1319	0.9422(-1)	-0.7850(-1)	0.5612(-1)	0.6158(-1)	-0.4432(-1)	-0.5811	-0.8349
9.0	0.1425	-0.1043	-0.1193	0.8759(-1)	-0.7547(-1)	0.5540(-1)	0.6015(-1)	-0.4439(-1)	-0.6101	-0.8381
10.0	0.1296	-0.9714(-1)	-0.1089	0.8187(-1)	-0.7248(-1)	0.5444(-1)	0.5847(-1)	-0.4411(-1)	-0.6355	-0.8410
20.0	0.6808(-1)	-0.5793(-1)	-0.5838(-1)	0.4972(-1)	-0.4981(-1)	0.4239(-1)	0.4224(-1)	-0.3599(-1)	-0.7811	-0.8577

Table A1. Functions f_V^i ($i=1, \dots, 10$) from eq.(20) at various $Kn = \frac{1}{2} \pi^{1/2} R^{-1}$

R	f_v^{11}	f_v^{12}	f_v^{13}	f_v^{14}	f_v^{15}	f_r^1	f_r^2	f_r^3	f_r^4
0.050	0.2202(-2)	-0.5557(-2)	0.1573(-4)	-0.9251(-1)	0.2588(-3)	0.9892	-0.1474(-2)	-0.9882	0.1145(-2)
0.075	0.4263(-2)	-0.8190(-2)	0.4500(-4)	-0.8985(-1)	0.4858(-3)	0.9823	-0.2827(-2)	-0.9807	0.2296(-2)
0.10	0.6619(-2)	-0.1076(-1)	0.9206(-4)	-0.8725(-1)	0.7313(-3)	0.9748	-0.4287(-2)	-0.9726	0.3556(-2)
0.25	0.2360(-1)	-0.2543(-1)	0.7838(-3)	-0.7258(-1)	0.2136(-2)	0.9227	-0.1313(-1)	-0.9176	0.1134(-1)
0.50	0.5456(-1)	-0.4842(-1)	0.3472(-2)	-0.4981(-1)	0.3237(-2)	0.8295	-0.2491(-1)	-0.8215	0.2195(-1)
0.75	0.8457(-1)	-0.7056(-1)	0.7834(-2)	-0.2800(-1)	0.2519(-2)	0.7416	-0.3300(-1)	-0.7324	0.2935(-1)
1.00	0.1126	-0.9216(-1)	0.1357(-1)	-0.6751(-2)	0.1763(-3)	0.6651	-0.3839(-1)	-0.6534	0.3436(-1)
1.25	0.1365	-0.1133	0.2041(-1)	0.1404(-1)	-0.3533(-2)	0.5941	-0.4189(-1)	-0.5845	0.3764(-1)
1.50	0.1626	-0.1340	0.2816(-1)	0.3438(-1)	-0.8374(-2)	0.5340	-0.4405(-1)	-0.5246	0.3971(-1)
1.75	0.1849	-0.1542	0.3664(-1)	0.5425(-1)	-0.1415(-1)	0.4814	-0.4526(-1)	-0.4725	0.4089(-1)
2.0	0.2058	-0.1740	0.4572(-1)	0.7363(-1)	-0.2069(-1)	0.4356	-0.4579(-1)	-0.4271	0.4144(-1)
2.5	0.2436	-0.2118	0.6520(-1)	0.1108	-0.3554(-1)	0.3600	-0.4552(-1)	-0.3525	0.4129(-1)
3.0	0.2772	-0.2474	0.8588(-1)	0.1458	-0.5207(-1)	0.3011	-0.4420(-1)	-0.2945	0.4015(-1)
4.0	0.3346	-0.3120	0.1289	0.2092	-0.8784(-1)	0.2176	-0.4030(-1)	-0.2123	0.3665(-1)
5.0	0.3822	-0.3684	0.1719	0.2645	-0.1248	0.1630	-0.3606(-1)	-0.1587	0.3279(-1)
6.0	0.4223	-0.4174	0.2135	0.3127	-0.1618	0.1257	-0.3210(-1)	-0.1222	0.2917(-1)
7.0	0.4567	-0.4602	0.2530	0.3546	-0.1961	0.9945(-1)	-0.2859(-1)	-0.9650(-1)	0.2596(-1)
8.0	0.4866	-0.4977	0.2900	0.3914	-0.2291	0.8034(-1)	-0.2553(-1)	-0.7779(-1)	0.2315(-1)
9.0	0.5126	-0.5307	0.3244	0.4237	-0.2600	0.6607(-1)	-0.2288(-1)	-0.6384(-1)	0.2073(-1)
10.0	0.5356	-0.5599	0.3563	0.4523	-0.2888	0.5519(-1)	-0.2060(-1)	-0.5321(-1)	0.1864(-1)
20.0	0.6705	-0.7317	0.5716	0.6207	-0.4853	0.1550(-1)	-0.8787(-2)	-0.1466(-1)	0.7886(-2)

Table A2. Functions f_v^i ($i=11, \dots, 15$) from eq.(20) and f_r^i ($i=1, \dots, 4$)

from eq.(24) at various $Kn = \frac{1}{2} \pi^{\frac{1}{2}} R^{-1}$

R	f_{Δ}^1	f_{Δ}^2	f_{Δ}^3	f_{Δ}^4	f_{Δ}^5	f_{Δ}^6	f_{Δ}^7	f_{Δ}^8	f_{Δ}^9	f_{Δ}^{10}	f_{Δ}^{11}
0.050	0.8816	-0.1313(-2)	-0.8807	0.1020(-2)	-0.2800(-2)	-0.8836	0.2474(-2)	0.6684(+2)	-0.1872	-0.5254(+2)	0.1472
0.075	0.8778	-0.2525(-2)	-0.8763	0.2052(-2)	-0.5418(-2)	-0.8835	0.4788(-2)	0.4468(+2)	-0.2421	-0.3514(+2)	0.1904
0.10	0.8733	-0.3841(-2)	-0.8713	0.3185(-2)	-0.8408(-2)	-0.8835	0.7430(-2)	0.3360(+2)	-0.2825	-0.2643(+2)	0.2224
0.25	0.8391	-0.1194(-1)	-0.8344	0.1031(-1)	-0.2988(-1)	-0.8833	0.2641(-1)	0.1364(+2)	-0.4079	-0.1075(+2)	0.3219
0.50	0.7725	-0.2320(-1)	-0.7651	0.2044(-1)	-0.6872(-1)	-0.8831	0.6074(-1)	0.6985(+1)	-0.4810	-0.5522(+1)	0.3811
0.75	0.7071	-0.3146(-1)	-0.6983	0.2799(-1)	-0.1060	-0.8828	0.9370(-1)	0.4768(+1)	-0.5070	-0.3779(+1)	0.4032
1.00	0.6473	-0.3748(-1)	-0.6379	0.3354(-1)	-0.1405	-0.8827	0.1242	0.3661(+1)	-0.5165	-0.2909(+1)	0.4121
1.25	0.5938	-0.4187(-1)	-0.5842	0.3762(-1)	-0.1722	-0.8826	0.1522	0.2998(+1)	-0.5190	-0.2389(+1)	0.4154
1.50	0.5464	-0.4508(-1)	-0.5369	0.4063(-1)	-0.2014	-0.8825	0.1781	0.2558(+1)	-0.5182	-0.2043(+1)	0.4159
1.75	0.5045	-0.4743(-1)	-0.4951	0.4285(-1)	-0.2283	-0.8824	0.2019	0.2245(+1)	-0.5159	-0.1798(+1)	0.4152
2.0	0.4673	-0.4913(-1)	-0.4582	0.4446(-1)	-0.2534	-0.8824	0.2240	0.2012(+1)	-0.5130	-0.1614(+1)	0.4139
2.5	0.4047	-0.5118(-1)	-0.3963	0.4642(-1)	-0.2985	-0.8824	0.2640	0.1687(+1)	-0.5068	-0.1360(+1)	0.4109
3.0	0.3546	-0.5205(-1)	-0.3468	0.4728(-1)	-0.3383	-0.8824	0.2992	0.1472(+1)	-0.5012	-0.1192(+1)	0.4081
4.0	0.2803	-0.5191(-1)	-0.2735	0.4721(-1)	-0.4056	-0.8824	0.3587	0.1208(+1)	-0.4926	-0.9859	0.4041
5.0	0.2286	-0.5059(-1)	-0.2227	0.4601(-1)	-0.4607	-0.8826	0.4075	0.1052(+1)	-0.4871	-0.8650	0.4021
6.0	0.1913	-0.4883(-1)	-0.1859	0.4438(-1)	-0.5068	-0.8827	0.4482	0.9507	-0.4837	-0.7862	0.4015
7.0	0.1633	-0.4693(-1)	-0.1584	0.4261(-1)	-0.5460	-0.8828	0.4828	0.8795	-0.4817	-0.7310	0.4017
8.0	0.1417	-0.4504(-1)	-0.1372	0.4085(-1)	-0.5796	-0.8829	0.5126	0.8270	-0.4806	-0.6904	0.4024
9.0	0.1248	-0.4321(-1)	-0.1206	0.3915(-1)	-0.6088	-0.8830	0.5384	0.7868	-0.4800	-0.6594	0.4035
10.0	0.1111	-0.4147(-1)	-0.1072	0.3753(-1)	-0.6344	-0.8831	0.5610	0.7551	-0.4799	-0.6350	0.4045
20.0	0.5122(-1)	-0.2903(-1)	-0.4842(-1)	0.2605(-1)	-0.7808	-0.8835	0.6903	0.6194	-0.4838	-0.5313	0.4153

Table A3. Functions f_{Δ}^i ($i=1, \dots, 11$) from eq.(31) at various $Kn = \frac{1}{2} \pi \frac{1}{2} R^{-1}$