

Supplementary information

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Table 1. The *ab initio* potential of the $X^1\Sigma^+$, $a^3\Pi$ and $A^1\Pi$ states of AlBr calculated at the MRCI+Q level of theory.

R/Å	$X^1\Sigma^+$ (a.u.)	$a^3\Pi$ (a.u.)	$A^1\Pi$ (a.u.)
1.5	-2814.237914	-2814.140391	-2814.082311
1.6	-2814.414783	-2814.316715	-2814.257445
1.7	-2814.534455	-2814.436072	-2814.376007
1.8	-2814.613732	-2814.514848	-2814.454288
1.9	-2814.664841	-2814.565112	-2814.504337
2	-2814.696486	-2814.595552	-2814.534874
2.02	-2814.701054	-2814.59984	-2814.539225
2.04	-2814.705132	-2814.603628	-2814.543093
2.06	-2814.708757	-2814.606953	-2814.546514
2.08	-2814.711963	-2814.609848	-2814.549524
2.1	-2814.71478	-2814.612346	-2814.552155
2.12	-2814.717238	-2814.614477	-2814.55444
2.14	-2814.719362	-2814.616268	-2814.556406
2.16	-2814.721179	-2814.617745	-2814.55808
2.18	-2814.722712	-2814.618933	-2814.559489
2.2	-2814.723981	-2814.619854	-2814.560655
2.22	-2814.725007	-2814.620529	-2814.5616
2.24	-2814.725807	-2814.620978	-2814.562347
2.26	-2814.726401	-2814.621217	-2814.562913
2.28	-2814.726802	-2814.621266	-2814.563318
2.3	-2814.727026	-2814.621139	-2814.563578
2.32	-2814.727087	-2814.620851	-2814.56371
2.34	-2814.726997	-2814.620416	-2814.563729
2.36	-2814.726769	-2814.619846	-2814.563649
2.38	-2814.726412	-2814.619155	-2814.563484
2.4	-2814.725938	-2814.618352	-2814.563246
2.42	-2814.725355	-2814.617448	-2814.562947
2.44	-2814.724672	-2814.616454	-2814.562598
2.46	-2814.723898	-2814.615378	-2814.56221
2.48	-2814.723041	-2814.614229	-2814.561791
2.5	-2814.722106	-2814.613015	-2814.56135
2.52	-2814.721101	-2814.611743	-2814.560895
2.54	-2814.720031	-2814.610421	-2814.560433
2.56	-2814.718903	-2814.609056	-2814.559969
2.58	-2814.717721	-2814.607652	-2814.559511
2.6	-2814.716491	-2814.606217	-2814.559061
2.7	-2814.709762	-2814.598754	-2814.55708
2.8	-2814.702383	-2814.591224	-2814.555716
2.9	-2814.694678	-2814.584097	-2814.554985
2.92	-2814.693119	-2814.582754	-2814.554904
2.94	-2814.691558	-2814.581444	-2814.554842

2.96	-2814.689995	-2814.580171	-2814.554796
2.98	-2814.688432	-2814.578935	-2814.554766
3	-2814.686871	-2814.577738	-2814.554751
3.02	-2814.685311	-2814.576583	-2814.554748
3.04	-2814.683755	-2814.575471	-2814.554756
3.06	-2814.682202	-2814.574402	-2814.554775
3.08	-2814.680653	-2814.573377	-2814.554803
3.1	-2814.67911	-2814.572398	-2814.554839
3.2	-2814.671492	-2814.56818	-2814.555103
3.3	-2814.664074	-2814.565032	-2814.555438
3.4	-2814.656892	-2814.562783	-2814.555578
3.5	-2814.649967	-2814.561215	-2814.556094
3.6	-2814.643306	-2814.560129	-2814.556364
3.7	-2814.636913	-2814.559371	-2814.556586
3.8	-2814.63078	-2814.558833	-2814.556761
3.9	-2814.624898	-2814.558444	-2814.556896
4	-2814.619252	-2814.558157	-2814.556996
4.1	-2814.613825	-2814.55794	-2814.557068
4.2	-2814.6086	-2814.557773	-2814.557118
4.3	-2814.60356	-2814.557642	-2814.557151
4.4	-2814.598691	-2814.557539	-2814.557172
4.5	-2814.593981	-2814.557457	-2814.557183
4.6	-2814.589432	-2814.55739	-2814.557188
4.7	-2814.585058	-2814.557336	-2814.557188
4.8	-2814.580897	-2814.557292	-2814.557185
4.9	-2814.577006	-2814.557256	-2814.557181
5	-2814.573459	-2814.557227	-2814.557176
5.2	-2814.567651	-2814.557185	-2814.557166
5.4	-2814.563655	-2814.557159	-2814.557158
5.6	-2814.561142	-2814.557141	-2814.557151
5.8	-2814.559627	-2814.557129	-2814.557144
6	-2814.55872	-2814.55712	-2814.557138
6.4	-2814.557832	-2814.55711	-2814.55713
6.8	-2814.557477	-2814.557106	-2814.557127
7	-2814.557383	-2814.557106	-2814.557126
7.2	-2814.557317	-2814.557106	-2814.557126
7.4	-2814.55727	-2814.557106	-2814.557126
7.6	-2814.557236	-2814.557107	-2814.557126
7.8	-2814.557209	-2814.557108	-2814.557127
8	-2814.557189	-2814.557108	-2814.557127

Table 2. The *ab initio* potential of the Ω states of AlBr molecule at the MRCI+Q level.

R/Å	$X^1\Sigma_0^+$ (a.u.)	$a^3\Pi_0^-$ (a.u.)	$a^3\Pi_0^+$ (a.u.)	$a^3\Pi_1$ (a.u.)	$a^3\Pi_2$ (a.u.)	$A^1\Pi_1$ (a.u.)
1.5	-2814.237933	-2814.141166	-2814.141147	-2814.1404	-2814.139615	-2814.082302
1.6	-2814.414801	-2814.317492	-2814.317474	-2814.316724	-2814.315938	-2814.257436
1.7	-2814.534472	-2814.436843	-2814.436825	-2814.43608	-2814.435301	-2814.375998
1.8	-2814.613749	-2814.515604	-2814.515587	-2814.514856	-2814.514093	-2814.45428
1.9	-2814.664858	-2814.565844	-2814.565827	-2814.56512	-2814.564381	-2814.504329
2	-2814.696503	-2814.596251	-2814.596234	-2814.595559	-2814.594853	-2814.534867
2.02	-2814.701071	-2814.600533	-2814.600516	-2814.599847	-2814.599148	-2814.539219
2.04	-2814.705149	-2814.604313	-2814.604296	-2814.603635	-2814.602944	-2814.543086
2.06	-2814.708774	-2814.60763	-2814.607613	-2814.606959	-2814.606275	-2814.546507
2.08	-2814.71198	-2814.610517	-2814.6105	-2814.609854	-2814.609178	-2814.549517
2.1	-2814.714797	-2814.613007	-2814.61299	-2814.612352	-2814.611684	-2814.552149
2.12	-2814.717255	-2814.61513	-2814.615113	-2814.614482	-2814.613823	-2814.554434
2.14	-2814.71938	-2814.616913	-2814.616896	-2814.616273	-2814.615622	-2814.5564
2.16	-2814.721197	-2814.618382	-2814.618365	-2814.617751	-2814.617108	-2814.558075
2.18	-2814.722729	-2814.619562	-2814.619545	-2814.618939	-2814.618305	-2814.559483
2.2	-2814.723998	-2814.620474	-2814.620457	-2814.619859	-2814.619234	-2814.560649
2.22	-2814.725024	-2814.62114	-2814.621123	-2814.620534	-2814.619918	-2814.561595
2.24	-2814.725825	-2814.62158	-2814.621563	-2814.620982	-2814.620375	-2814.562342
2.26	-2814.726418	-2814.621811	-2814.621794	-2814.621222	-2814.620624	-2814.562908
2.28	-2814.726819	-2814.621851	-2814.621834	-2814.621271	-2814.620681	-2814.563313
2.3	-2814.727043	-2814.621715	-2814.621698	-2814.621143	-2814.620563	-2814.563573
2.32	-2814.727104	-2814.621418	-2814.621401	-2814.620855	-2814.620284	-2814.563706
2.34	-2814.727014	-2814.620974	-2814.620957	-2814.62042	-2814.619858	-2814.563725
2.36	-2814.726786	-2814.620395	-2814.620378	-2814.61985	-2814.619297	-2814.563645
2.38	-2814.726429	-2814.619695	-2814.619677	-2814.619158	-2814.618615	-2814.56348
2.4	-2814.725955	-2814.618883	-2814.618866	-2814.618355	-2814.617821	-2814.563242
2.42	-2814.725372	-2814.61797	-2814.617953	-2814.617452	-2814.616926	-2814.562944
2.44	-2814.724689	-2814.616967	-2814.61695	-2814.616457	-2814.615941	-2814.562595
2.46	-2814.723915	-2814.615882	-2814.615865	-2814.615381	-2814.614874	-2814.562207
2.48	-2814.723058	-2814.614724	-2814.614707	-2814.614232	-2814.613734	-2814.561788
2.5	-2814.722123	-2814.613501	-2814.613484	-2814.613018	-2814.612529	-2814.561347
2.52	-2814.721118	-2814.61222	-2814.612203	-2814.611746	-2814.611267	-2814.560892
2.54	-2814.720048	-2814.610889	-2814.610872	-2814.610424	-2814.609954	-2814.56043
2.56	-2814.71892	-2814.609514	-2814.609497	-2814.609058	-2814.608597	-2814.559967
2.58	-2814.717739	-2814.608102	-2814.608085	-2814.607655	-2814.607202	-2814.559508
2.6	-2814.716509	-2814.606658	-2814.606641	-2814.60622	-2814.605776	-2814.559058
2.7	-2814.709779	-2814.599151	-2814.599134	-2814.598756	-2814.598356	-2814.557078
2.8	-2814.7024	-2814.59158	-2814.591563	-2814.591226	-2814.590867	-2814.555714
2.9	-2814.694696	-2814.584414	-2814.584396	-2814.584099	-2814.583779	-2814.554983
2.92	-2814.693137	-2814.583064	-2814.583046	-2814.582756	-2814.582444	-2814.554902
2.94	-2814.691576	-2814.581747	-2814.581729	-2814.581446	-2814.581142	-2814.55484

2.96	-2814.690014	-2814.580466	-2814.580447	-2814.580173	-2814.579875	-2814.554794
2.98	-2814.688451	-2814.579223	-2814.579204	-2814.578937	-2814.578646	-2814.554764
3	-2814.68689	-2814.57802	-2814.578001	-2814.57774	-2814.577457	-2814.554749
3.02	-2814.68533	-2814.576858	-2814.576839	-2814.576585	-2814.576309	-2814.554746
3.04	-2814.683774	-2814.575738	-2814.575719	-2814.575473	-2814.575203	-2814.554754
3.06	-2814.682221	-2814.574663	-2814.574644	-2814.574404	-2814.57414	-2814.554773
3.08	-2814.680673	-2814.573632	-2814.573613	-2814.57338	-2814.573122	-2814.554801
3.1	-2814.67913	-2814.572647	-2814.572627	-2814.5724	-2814.572149	-2814.554837
3.2	-2814.671512	-2814.568401	-2814.568381	-2814.568183	-2814.567959	-2814.555101
3.3	-2814.664095	-2814.565232	-2814.565211	-2814.565036	-2814.564833	-2814.555435
3.4	-2814.656913	-2814.562967	-2814.562946	-2814.562788	-2814.5626	-2814.555776
3.5	-2814.649987	-2814.561387	-2814.561366	-2814.561221	-2814.561044	-2814.556088
3.6	-2814.643327	-2814.560291	-2814.560271	-2814.560136	-2814.559966	-2814.556357
3.7	-2814.636933	-2814.559527	-2814.559506	-2814.55938	-2814.559214	-2814.556576
3.8	-2814.630801	-2814.558984	-2814.558964	-2814.558845	-2814.558681	-2814.556749
3.9	-2814.624919	-2814.558592	-2814.558571	-2814.55846	-2814.558296	-2814.55688
4	-2814.619274	-2814.558302	-2814.558281	-2814.558177	-2814.558011	-2814.556975
4.1	-2814.613847	-2814.558083	-2814.558061	-2814.557966	-2814.557796	-2814.557042
4.2	-2814.608623	-2814.557915	-2814.557892	-2814.557806	-2814.557631	-2814.557084
4.3	-2814.603584	-2814.557784	-2814.55776	-2814.557685	-2814.557501	-2814.557109
4.4	-2814.598716	-2814.55768	-2814.557654	-2814.557592	-2814.557398	-2814.557119
4.5	-2814.594008	-2814.557597	-2814.55757	-2814.557522	-2814.557316	-2814.557118
4.6	-2814.589461	-2814.55753	-2814.557501	-2814.557468	-2814.55725	-2814.55711
4.7	-2814.58509	-2814.557476	-2814.557444	-2814.557427	-2814.557196	-2814.557097
4.8	-2814.580931	-2814.557432	-2814.557398	-2814.557395	-2814.557152	-2814.557083
4.9	-2814.577042	-2814.557396	-2814.55736	-2814.557369	-2814.557116	-2814.557068
5	-2814.573498	-2814.557367	-2814.557328	-2814.557349	-2814.557087	-2814.557054
5.2	-2814.567694	-2814.557326	-2814.557282	-2814.55732	-2814.557045	-2814.557031
5.4	-2814.563701	-2814.557299	-2814.557253	-2814.557302	-2814.557018	-2814.557014
5.6	-2814.561193	-2814.557282	-2814.557231	-2814.557289	-2814.557	-2814.557002
5.8	-2814.559686	-2814.55727	-2814.557212	-2814.55728	-2814.556988	-2814.556993
6	-2814.558789	-2814.557262	-2814.557192	-2814.557272	-2814.556979	-2814.556986
6.4	-2814.557939	-2814.557252	-2814.557145	-2814.557263	-2814.556968	-2814.556977
6.8	-2814.557633	-2814.557248	-2814.557092	-2814.557259	-2814.556965	-2814.556974
7	-2814.557562	-2814.557248	-2814.557068	-2814.557258	-2814.556964	-2814.556974
7.2	-2814.557517	-2814.557248	-2814.557048	-2814.557258	-2814.556964	-2814.556974
7.4	-2814.557488	-2814.557248	-2814.557031	-2814.557259	-2814.556964	-2814.556974
7.6	-2814.557467	-2814.557249	-2814.557017	-2814.557259	-2814.556965	-2814.556974
7.8	-2814.557453	-2814.55725	-2814.557006	-2814.557259	-2814.556966	-2814.556975
8	-2814.557442	-2814.55725	-2814.556997	-2814.55726	-2814.556967	-2814.556976

Table 3. PDMs for the $X^1\Sigma^+$, $a^3\Pi$ and $A^1\Pi$ states and TDM for the $A^1\Pi \rightarrow X^1\Sigma^+$ transition of AlBr molecule at the MRCI level.

R/Å	$X^1\Sigma^+$ (a.u.)	$a^3\Pi$ (a.u.)	$A^1\Pi$ (a.u.)	$A^1\Pi \rightarrow X^1\Sigma^+$ (a.u.)
1.5	1.02872552	0.622751168	0.779300422	-1.42575175
1.6	0.911502787	0.46166233	0.622811746	-1.41246082
1.7	0.765201113	0.296447065	0.472531162	-1.39003951
1.8	0.592477396	0.128004008	0.327913583	-1.36191311
1.9	0.395534166	-0.04291822	0.190447868	-1.32901065
2	0.176590533	-0.215299898	0.063998917	-1.29070182
2.02	0.130382038	-0.249806001	0.040525985	-1.28223243
2.04	0.083420385	-0.284285561	0.017788324	-1.27344621
2.06	0.035741736	-0.318715302	-0.004157039	-1.26432261
2.08	-0.012623192	-0.353072958	-0.025248125	-1.25483798
2.1	-0.061635722	-0.387331901	-0.045423043	-1.24496945
2.12	-0.111262977	-0.421466434	-0.06461621	-1.2346916
2.14	-0.161468332	-0.455448021	-0.082761666	-1.22397913
2.16	-0.212215111	-0.489246573	-0.099792878	-1.21280635
2.18	-0.263465394	-0.522830015	-0.115643271	-1.20114752
2.2	-0.315181255	-0.556164628	-0.130247115	-1.1889771
2.22	-0.367324658	-0.589214949	-0.143540885	-1.17627072
2.24	-0.419857636	-0.621943789	-0.155462598	-1.16300303
2.26	-0.47274242	-0.65431185	-0.165955858	-1.149152
2.28	-0.525941924	-0.686279297	-0.174969623	-1.13469697
2.3	-0.579418515	-0.717803641	-0.182461041	-1.11962046
2.32	-0.633135988	-0.748839968	-0.18839586	-1.10390766
2.34	-0.687058652	-0.779342525	-0.192752786	-1.08754885
2.36	-0.741151326	-0.809263324	-0.19552444	-1.07053941
2.38	-0.795379693	-0.838552557	-0.196719554	-1.05288089
2.4	-0.849710039	-0.867158415	-0.196362389	-1.03458037
2.42	-0.904109661	-0.895027086	-0.194498433	-1.01565464
2.44	-0.958546678	-0.92210258	-0.191185104	-0.996123783
2.46	-1.01299021	-0.94832664	-0.186495636	-0.97601472
2.48	-1.06741031	-0.973651454	-0.180516246	-0.95535981
2.5	-1.121778	-0.997987581	-0.173344006	-0.934197431
2.52	-1.17606529	-1.0212823	-0.165091536	-0.912568822
2.54	-1.23024927	-1.04346708	-0.155880188	-0.890526368
2.56	-1.28429573	-1.06446884	-0.145842189	-0.868126548
2.58	-1.338184	-1.0842128	-0.135121595	-0.845427355
2.6	-1.39189035	-1.10261998	-0.123865381	-0.822495208
2.7	-1.65692313	-1.17160613	-0.064759623	-0.706823617
2.8	-1.91441045	-1.19366189	-0.012412344	-0.595625365
2.9	-2.16244252	-1.15766	0.024184896	-0.495108003
2.92	-2.21078248	-1.14283927	0.029421062	-0.476581772
2.94	-2.25867663	-1.12544941	0.033988825	-0.458605972

2.96	-2.30611731	-1.10553397	0.037917314	-0.441182345
2.98	-2.35309887	-1.08316374	0.041236992	-0.424309427
3	-2.39961387	-1.05843816	0.043981631	-0.407982946
3.02	-2.44565716	-1.03149368	0.04618743	-0.392196019
3.04	-2.49122216	-1.00249788	0.04789191	-0.37693966
3.06	-2.53630985	-0.971650239	0.049133306	-0.362203378
3.08	-2.58091581	-0.939179366	0.04995012	-0.347975333
3.1	-2.62503807	-0.905339043	0.050380474	-0.334242616
3.2	-2.83839644	-0.725381997	0.047994972	-0.272523535
3.3	-3.03972802	-0.552573918	0.040967896	-0.221105869
3.4	-3.22895342	-0.409022846	0.031966745	-0.178221096
3.5	-3.40546857	-0.300253331	0.022783638	-0.142467455
3.6	-3.56807454	-0.221792622	0.014276178	-0.112644187
3.7	-3.71504902	-0.166339219	0.006825978	-0.087777991
3.8	-3.84416783	-0.127260124	5.56E-04	-0.067083258
3.9	-3.95268102	-0.099522205	-0.004549299	-0.049924869
4	-4.03721727	-0.079574316	-0.008573143	-0.035786833
4.1	-4.09368421	-0.064984405	-0.011631055	-0.024246403
4.2	-4.1171771	-0.054103293	-0.013850037	-0.014955204
4.3	-4.10190701	-0.045813479	-0.015355449	-0.007624172
4.4	-4.04207252	-0.039353443	-0.016263717	-0.001983728
4.5	-3.9290836	-0.034202941	-0.016681963	0.002127146
4.6	-3.75697556	-0.030003281	-0.016704664	0.004915607
4.7	-3.52134337	-0.026508998	-0.016418341	0.006553464
4.8	-3.22291239	-0.023560719	-0.015909044	0.00721516
4.9	-2.87078592	-0.021052852	-0.015254662	0.007087943
5	-2.48403363	-0.018909795	-0.014518487	0.006374132
5.2	-1.71347633	-0.015500789	-0.012983246	0.004016462
5.4	-1.09188027	-0.012979668	-0.011534948	0.001545611
5.6	-0.670626008	-0.01106798	-0.010237858	-3.59E-04
5.8	-0.410131962	-0.00956833	-0.009091712	-0.001575413
6	-0.253996064	-0.008353824	-0.00808085	-0.002259248
6.4	-0.105271013	-0.006494794	-0.00640669	-0.002655724
6.8	-0.050284853	-0.005142663	-0.005114338	-0.002464535
7	-0.037120481	-0.004602254	-0.004585327	-0.002286661
7.2	-0.02853526	-0.004133498	-0.004122473	-0.002098143
7.4	-0.022747383	-0.003727981	-0.0037214	-0.00190773
7.6	-0.018700115	-0.003374016	-0.003363766	-0.001725751
7.8	-0.015757489	-0.003063285	-0.003056115	-0.001559101
8	-0.013511874	-0.002786518	-0.002781343	-0.001400713

Table 4. TDMs for the $A^1\Pi_1 \rightarrow X^1\Sigma_0^+$, $a^3\Pi_0 \rightarrow X^1\Sigma_0^+$, $a^3\Pi_1 \rightarrow X^1\Sigma_0^+$, $A^1\Pi_1 \rightarrow a^3\Pi_0$ and $A^1\Pi_1 \rightarrow a^3\Pi_1$ transitions of AlBr molecule at the MRCI level.

R/Å	$A^1\Pi_1 \rightarrow X^1\Sigma_0^+$	$a^3\Pi_0 \rightarrow X^1\Sigma_0^+$	$a^3\Pi_1 \rightarrow X^1\Sigma_0^+$	$A^1\Pi_1 \rightarrow a^3\Pi_0$	$A^1\Pi_1 \rightarrow a^3\Pi_1$
1.5	1.4255	-0.005732	0.017788	0.0201292	0.00195324
1.6	1.412227	-0.006083	0.017283	0.01910112	0.00197184
1.7	1.389819	-0.006215	0.016629	0.01842897	0.00210654
1.8	1.361705	-0.006106	0.015798	0.01790531	0.00231903
1.9	1.328815	-0.005738	0.014801	0.01739446	0.00259902
2	1.290521	-0.005106	0.013665	0.01681563	0.0029572
2.02	1.282054	-0.004948	0.013425	0.01668715	0.00303979
2.04	1.273271	-0.00478	0.01318	0.01655378	0.00312648
2.06	1.264151	-0.004602	0.012931	0.01641524	0.00321734
2.08	1.254669	-0.004414	0.012679	0.01627129	0.00331254
2.1	1.244804	-0.004217	0.012424	0.01612165	0.00341214
2.12	1.234529	-0.004011	0.012166	0.01596613	0.00351628
2.14	1.22382	-0.003796	0.011905	0.01580449	0.00362502
2.16	1.212651	-0.003572	0.011642	0.01563652	0.00373845
2.18	1.200995	-0.003339	0.011376	0.01546204	0.00385661
2.2	1.188828	-0.003097	0.011109	0.01528083	0.00397951
2.22	1.176125	-0.002847	0.01084	0.01509274	0.00410714
2.24	1.162861	-0.002589	0.010569	0.0148976	0.00423946
2.26	1.149013	-0.002322	0.010298	0.01469526	0.00437638
2.28	1.134562	-0.002047	0.010025	0.01448562	0.00451779
2.3	1.119489	-0.001764	0.009753	0.01426863	0.00466351
2.32	1.103779	-0.001472	0.00948	0.01404425	0.0048133
2.34	1.087424	-0.001172	0.009208	0.0138125	0.00496689
2.36	1.070418	-8.64E-04	0.008937	0.0135735	0.00512394
2.38	1.052762	-5.46E-04	0.008668	0.01332742	0.00528404
2.4	1.034465	-2.20E-04	0.0084	0.0130745	0.00544677
2.42	1.015543	-1.15E-04	0.008136	0.01281511	0.00561164
2.44	0.996015	4.59E-04	0.007874	0.01254964	0.00577817
2.46	0.975909	8.13E-04	0.007617	0.01227858	0.0059459
2.48	0.955258	0.001178	0.007365	0.01200246	0.00611448
2.5	0.934098	0.001553	0.007118	0.01172191	0.00628332
2.52	0.912473	0.00194	0.006877	0.01143756	0.00645211
2.54	0.890434	0.002339	0.006642	0.01115018	0.00662062
2.56	0.868037	0.00275	0.006415	0.01086055	0.00678851
2.58	0.84534	0.003175	0.006196	0.01056947	0.00695558
2.6	0.82241	0.003615	0.005984	0.01027784	0.0071217
2.7	0.706751	0.006071	0.005069	0.00884278	0.00793877
2.8	0.595562	0.009096	0.004412	0.00751701	0.00875032

2.9	0.495051	0.012904	0.004012	0.00635886	0.00957724
2.92	0.476526	0.013777	0.003961	0.00614864	0.00974268
2.94	0.458551	0.014691	0.003918	0.00594539	0.00990673
2.96	0.441128	0.015644	0.003885	0.00574886	0.01006847
2.98	0.424255	0.016636	0.003859	0.00555879	0.01022683
3	0.407929	0.017669	0.003841	0.00537495	0.0103806
3.02	0.392143	0.018739	0.003831	0.00519706	0.0105285
3.04	0.376887	0.019845	0.003829	0.0050248	0.01066919
3.06	0.36215	0.020985	0.003833	0.00485792	0.01080134
3.08	0.347922	0.022156	0.003843	0.00469613	0.01092367
3.1	0.334189	0.023354	0.003859	0.00453914	0.01103501
3.2	0.272467	0.029606	0.004016	0.00381839	0.01139778
3.3	0.221041	0.035897	0.00426	0.00319093	0.01143452
3.4	0.178143	0.041861	0.004537	0.00264503	0.01122358
3.5	0.14237	0.04742	0.004802	0.00217463	0.01088411
3.6	0.112518	0.052685	0.005018	0.00177197	0.01050782
3.7	0.087615	0.057828	0.00515	0.0014281	0.01014452
3.8	0.066874	0.063009	0.005164	0.00113398	0.00981113
3.9	0.049664	0.068363	0.00502	8.81E-04	0.00950345
4	0.035473	0.073986	0.004678	6.63E-04	0.00920261
4.1	0.023894	0.079942	0.004092	4.74E-04	0.00887695
4.2	0.014599	0.08625	0.003227	3.10E-04	0.00848234
4.3	0.007335	0.092871	0.002072	1.68E-04	0.00796759
4.4	0.001868	0.099688	6.65E-04	4.66E-05	0.00729103
4.5	0.001947	0.106438	8.55E-04	-5.33E-05	0.00644792
4.6	0.004345	0.112724	0.002293	-1.32E-04	0.00548972
4.7	0.005575	0.117971	0.003438	1.88E-04	0.00450871
4.8	0.005905	0.121473	0.004136	2.25E-04	0.00359585
4.9	0.005597	0.122535	0.004339	-2.41E-04	0.00280787
5	0.004877	0.120711	0.004093	-2.39E-04	0.00216261
5.2	0.002927	0.109017	0.002738	-1.89E-04	0.00125616
5.4	0.001091	0.091551	0.001087	-9.33E-05	7.22E-04
5.6	2.48E-04	0.074507	2.56E-04	-2.84E-05	-4.15E-04
5.8	0.001071	0.060722	0.001129	-1.66E-04	-2.38E-04
6	0.001512	0.050037	0.001611	-3.22E-04	-1.36E-04
6.4	0.001684	0.033664	0.001809	-6.63E-04	-4.40E-05
6.8	0.001416	0.020457	0.001521	9.02E-04	-1.42E-05
7	0.001243	0.015642	0.001335	-9.40E-04	-8.46E-06
7.2	0.001084	0.012067	0.001163	-9.34E-04	-5.52E-06
7.4	9.42E-04	0.009499	0.00101	-8.98E-04	-3.29E-06
7.6	8.21E-04	0.00766	8.78E-04	-8.46E-04	-5.10E-06
7.8	7.18E-04	0.006321	7.68E-04	-7.86E-04	-3.55E-06
8	6.28E-04	0.005311	6.71E-04	-7.22E-04	-2.54E-06