

SUPPLEMENTARY DATA

TABLE I. Table of sixteen collision integrals accurate to seven digits past the decimal (computed with error tolerance 1×10^{-8}). Values are provided over a set of T^* values ranging between 0.3 and 400.

T^*	$\Omega^{(1,1)*}$	$\Omega^{(1,2)*}$	$\Omega^{(1,3)*}$	$\Omega^{(1,4)*}$	$\Omega^{(1,5)*}$	$\Omega^{(1,6)*}$	$\Omega^{(1,7)*}$	$\Omega^{(2,2)*}$
0.30	2.6500024	2.2568342	1.9665277	1.7422927	1.5692059	1.4367486	1.3357334	2.8436719
0.35	2.4690902	2.0803498	1.7992869	1.5906654	1.4362847	1.3224167	1.2377740	2.6793810
0.40	2.3147191	1.9334804	1.6655752	1.4739771	1.3372123	1.2389202	1.1669636	2.5333021
0.45	2.1817500	1.8106979	1.5576333	1.3828143	1.2614679	1.1758283	1.1136355	2.4027196
0.50	2.0663606	1.7072842	1.4695923	1.3103104	1.2021301	1.1266734	1.0720503	2.2852477
0.55	1.9654568	1.6195116	1.3970409	1.2516628	1.1545826	1.0873425	1.0386623	2.1797044
0.60	1.8769305	1.5445772	1.3364925	1.2034475	1.1157023	1.0551401	1.0111924	2.0848158
0.65	1.7987221	1.4800688	1.2854200	1.1632213	1.0833326	1.0282481	0.98812233	1.9994146
0.70	1.7292913	1.4242462	1.2419179	1.1292004	1.0559550	1.0054049	0.96840757	1.9226284
0.75	1.6675641	1.3754865	1.2044863	1.1000678	1.0324731	0.98571345	0.95130868	1.8533519
0.80	1.6121364	1.3326440	1.1719829	1.0748426	1.0120831	0.96852089	0.93628907	1.7906831
0.85	1.5624746	1.2948503	1.1435158	1.0527821	0.99418312	0.95334226	0.92295044	1.7340892
0.90	1.5174627	1.2612243	1.1184037	1.0333110	0.97831663	0.93981035	0.91099132	1.6826234
0.95	1.4768357	1.2311810	1.0960772	1.0159875	0.96413043	0.92764266	0.90017961	1.6358666
1.00	1.4397702	1.2041955	1.0761146	1.0004554	0.95134931	0.91661848	0.89033337	1.5931672
1.05	1.4060217	1.1798014	1.0581465	0.98643969	0.93975414	0.90656270	0.88130844	1.5541219
1.10	1.3750666	1.1577189	1.0418789	0.97371159	0.92916937	0.89733523	0.87298883	1.5184065
1.15	1.3466473	1.1376075	1.0270868	0.96208905	0.91945328	0.88882209	0.86528009	1.4855505
1.20	1.3204234	1.1192153	1.0135626	0.95142110	0.91048923	0.88092999	0.85810466	1.4552844
1.25	1.2962670	1.1023150	1.0011456	0.94158523	0.90218129	0.87358176	0.85139815	1.4273571
T^*	$\Omega^{(2,3)*}$	$\Omega^{(2,4)*}$	$\Omega^{(2,5)*}$	$\Omega^{(2,6)*}$	$\Omega^{(3,3)*}$	$\Omega^{(3,4)*}$	$\Omega^{(3,5)*}$	$\Omega^{(4,4)*}$
0.30	2.5806610	2.3622719	2.1704207	2.0010465	2.3996913	2.1698726	1.9860912	2.5710549
0.35	2.4091063	2.1834561	1.9898392	1.8258038	2.2254600	2.0038490	1.8289555	2.3938882
0.40	2.2575571	2.0297914	1.8408867	1.6868985	2.0803510	1.8673483	1.7018522	2.2395320
0.45	2.1240588	1.8990875	1.7186542	1.5765238	1.9575384	1.7537232	1.5977523	2.1053244
0.50	2.0069722	1.7882134	1.6181863	1.4880206	1.8525505	1.6580928	1.5116212	1.9886589
0.55	1.9046180	1.6940822	1.5350981	1.4162050	1.7620821	1.5769424	1.4396656	1.8871923
0.60	1.8150156	1.6138942	1.4658166	1.3571792	1.6835043	1.5075387	1.3789923	1.7987636
0.65	1.7364493	1.5452565	1.4075304	1.3080480	1.6148438	1.4477580	1.3273775	1.7214751
0.70	1.6674359	1.4861632	1.3580404	1.2666544	1.5545007	1.3959162	1.2830921	1.6536775
0.75	1.6065811	1.4349531	1.3156437	1.2313822	1.5011905	1.3506548	1.2447869	1.5939665
0.80	1.5526726	1.3903133	1.2790066	1.2010100	1.4538369	1.3108971	1.2113994	1.5411581
0.85	1.5047917	1.3511504	1.2470898	1.1746032	1.4115863	1.2757691	1.1820864	1.4942592
0.90	1.4620443	1.3165932	1.2190696	1.1514400	1.3737257	1.2445561	1.1561756	1.4524316
0.95	1.4237576	1.2859202	1.1942947	1.1309565	1.3396477	1.2166734	1.1331257	1.4149738
1.00	1.3893188	1.2585459	1.1722436	1.1127074	1.3088446	1.1916425	1.1124988	1.3812893
1.05	1.3582156	1.2339935	1.1524937	1.0963379	1.2809145	1.1690665	1.0939370	1.3508871
1.10	1.3300294	1.2118563	1.1347033	1.0815622	1.2554800	1.1486110	1.0771464	1.3233387
1.15	1.3043943	1.1918081	1.1185922	1.0681483	1.2322414	1.1300009	1.0618842	1.2982860
1.20	1.2809860	1.1735721	1.1039286	1.0559062	1.2109437	1.1130009	1.0479478	1.2754262
1.25	1.2595512	1.1569163	1.0905207	1.0446789	1.1913652	1.0974136	1.0351684	1.2544978

T^*	$\Omega^{(1,1)*}$	$\Omega^{(1,2)*}$	$\Omega^{(1,3)*}$	$\Omega^{(1,4)*}$	$\Omega^{(1,5)*}$	$\Omega^{(1,6)*}$	$\Omega^{(1,7)*}$	$\Omega^{(2,2)*}$
1.30	1.2738574	1.0867759	0.98969426	0.93247623	0.89444917	0.86671280	0.84510662	1.4015367
1.35	1.2530452	1.0724095	0.97910188	0.92400777	0.88722575	0.86026898	0.83918453	1.3775536
1.40	1.2336136	1.0590926	0.96926129	0.91610605	0.88045410	0.85420416	0.83359312	1.3552816
1.45	1.2155747	1.0467019	0.96009215	0.90870885	0.87408586	0.84847912	0.82829923	1.3345419
1.50	1.1986808	1.0351603	0.95152055	0.90176277	0.86807940	0.84306002	0.82327421	1.3152088
1.55	1.1828536	1.0243771	0.94348497	0.89522147	0.86239909	0.83791765	0.81849327	1.2971279
1.60	1.1679578	1.0142682	0.93593428	0.88904506	0.85701370	0.83302664	0.81393476	1.2801718
1.65	1.1539511	1.0047749	0.92881914	0.88319896	0.85189631	0.82836480	0.80957967	1.2642756
1.70	1.1408224	0.99583780	0.92209781	0.87765275	0.84702325	0.82391262	0.80541135	1.2493360
1.75	1.1284010	0.98740237	0.91573575	0.87238001	0.84237367	0.81965290	0.80141495	1.2352709
1.80	1.1166373	0.97943615	0.90970084	0.86735749	0.83792919	0.81557048	0.79757735	1.2220198
1.85	1.1055155	0.97189625	0.90396440	0.86256423	0.83367350	0.81165172	0.79388680	1.2095019
1.90	1.0949587	0.96474278	0.89850262	0.85798182	0.82959206	0.80788453	0.79033282	1.1976519
1.95	1.0849179	0.95794271	0.89329397	0.85359390	0.82567190	0.80425810	0.78690594	1.1864277
2.0	1.0753782	0.95147239	0.88831761	0.84938582	0.82190137	0.80076262	0.78359768	1.1757878
2.1	1.0576880	0.93941612	0.87899283	0.84145786	0.81476839	0.79413024	0.77730684	1.1560755
2.2	1.0415415	0.92839764	0.87040761	0.83410749	0.80812087	0.78792640	0.77140676	1.1382131
2.3	1.0267699	0.91828467	0.86246292	0.82726094	0.80189937	0.78210064	0.76585289	1.1219472
2.4	1.0131781	0.90894977	0.85507731	0.82085684	0.79605443	0.77661074	0.76060781	1.1070586
2.5	1.0006472	0.90029830	0.84818368	0.81484417	0.79054453	0.77142109	0.75563978	1.0933919
2.6	0.98906701	0.89224814	0.84172453	0.80917987	0.78533451	0.76650137	0.75092168	1.0807943
2.7	0.97829129	0.88472900	0.83565191	0.80382741	0.78039436	0.76182556	0.74643015	1.0691400
2.8	0.96824673	0.87768660	0.82992513	0.79875553	0.77569826	0.75737120	0.74214494	1.0583269
2.9	0.95886031	0.87106903	0.82450913	0.79393736	0.77122390	0.75311876	0.73804836	1.0482551
3.0	0.95005427	0.86483130	0.81937367	0.78934962	0.76695180	0.74905117	0.73412491	1.0388470
3.1	0.94177557	0.85893580	0.81449279	0.78497194	0.76286495	0.74515340	0.73036091	1.0300376
3.2	0.93400074	0.85335175	0.80984369	0.78078651	0.75894835	0.74141217	0.72674421	1.0217697
3.3	0.92666046	0.84805008	0.80540630	0.77677772	0.75518872	0.73781571	0.72326405	1.0139889
3.4	0.91970993	0.84300574	0.80116297	0.77293164	0.75157428	0.73435352	0.71991072	1.0066494
3.5	0.91311310	0.83819666	0.79709810	0.76923595	0.74809450	0.73101614	0.71667561	0.99971193
3.6	0.90685315	0.83360430	0.79319799	0.76567966	0.74473996	0.72779516	0.71355081	0.99314079
T^*	$\Omega^{(2,3)*}$	$\Omega^{(2,4)*}$	$\Omega^{(2,5)*}$	$\Omega^{(2,6)*}$	$\Omega^{(3,3)*}$	$\Omega^{(3,4)*}$	$\Omega^{(3,5)*}$	$\Omega^{(4,4)*}$
1.30	1.2398589	1.1416427	1.0782082	1.0343361	1.1733062	1.0830712	1.0234031	1.2352759
1.35	1.2217188	1.1275872	1.0668561	1.0247685	1.1566067	1.0698304	1.0125311	1.2175683
1.40	1.2049473	1.1146073	1.0563501	1.0158838	1.1411207	1.0575671	1.0024495	1.2012088
1.45	1.1894056	1.1025824	1.0465931	1.0076041	1.1267275	1.0461757	0.99307048	1.1860539
1.50	1.1749662	1.0914076	1.0375022	0.99986251	1.1133123	1.0355640	0.98431832	1.1719775
1.55	1.1615160	1.0809925	1.0290059	0.99260197	1.1007802	1.0256524	0.97612759	1.1588698
1.60	1.1489623	1.0712592	1.0210426	0.98577312	1.0890508	1.0163714	0.96844160	1.1466352
1.65	1.1372108	1.0621399	1.0135589	0.97933319	1.0780449	1.0076599	0.96121097	1.1351894
1.70	1.1261887	1.0535748	1.0065081	0.97324497	1.0676999	0.99946422	0.95439245	1.1244586
1.75	1.1158312	1.0455117	0.99984960	0.96747593	1.0579583	0.99173737	0.94794812	1.1143770
1.80	1.1060784	1.0379050	0.99354748	0.96199748	1.0487650	0.98443768	0.94184454	1.1048868
1.85	1.0968772	1.0307135	0.98757016	0.95678443	1.0400747	0.97752803	0.93605214	1.0959359
1.90	1.0881810	1.0239013	0.98189003	0.95181448	1.0318466	0.97097562	0.93054467	1.0874785
1.95	1.0799496	1.0174365	0.97648202	0.94706785	1.0240442	0.96475115	0.92529879	1.0794735
2.0	1.0721422	1.0112907	0.97132416	0.94252689	1.0166328	0.95882826	0.92029365	1.0718843
2.1	1.0576712	0.99985674	0.96168219	0.93400056	1.0028680	0.94779539	0.91093290	1.0578241
2.2	1.0445409	0.98942473	0.95282960	0.92612771	0.99034584	0.93771554	0.90233462	1.0450714
2.3	1.0325613	0.97985338	0.94465732	0.91882073	0.97889431	0.92845696	0.89439477	1.0334411
2.4	1.0215773	0.97102666	0.93707600	0.91200766	0.96837334	0.91991113	0.88702785	1.0227808
2.5	1.0114602	0.96284896	0.93001171	0.90562882	0.95866550	0.91198800	0.88016290	1.0129643
2.6	1.0021004	0.95524048	0.92340281	0.89963429	0.94967207	0.90461216	0.87374059	1.0038861
2.7	0.99340868	0.94813418	0.91719743	0.89398190	0.94130938	0.89772016	0.86771093	0.99545741
2.8	0.98530826	0.94147344	0.91135165	0.88863584	0.93350643	0.89125817	0.86203147	0.98760320
2.9	0.97773329	0.93520999	0.90582799	0.88356547	0.92620218	0.88518026	0.85666594	0.98025947
3.0	0.97062776	0.92930264	0.90059428	0.87874436	0.91934463	0.87944694	0.85158315	0.97337142
3.1	0.96394335	0.92371569	0.89562274	0.87414960	0.91288876	0.87402418	0.84675611	0.96689191
3.2	0.95763837	0.91841838	0.89088924	0.86976125	0.90679542	0.86888240	0.84216139	0.96078014
3.3	0.95167605	0.91338390	0.88637269	0.86556181	0.90103025	0.86399579	0.83777848	0.95500065
3.4	0.94602470	0.90858880	0.88205461	0.86153587	0.89556349	0.85934176	0.83358936	0.94952249
3.5	0.94065658	0.90401245	0.87791870	0.85766981	0.89036869	0.85490049	0.82957817	0.94431847
3.6	0.93554710	0.89963667	0.87395053	0.85395152	0.88542254	0.85065434	0.82573082	0.93936475

T^*	$\Omega^{(1,1)*}$	$\Omega^{(1,2)*}$	$\Omega^{(1,3)*}$	$\Omega^{(1,4)*}$	$\Omega^{(1,5)*}$	$\Omega^{(1,6)*}$	$\Omega^{(1,7)*}$	$\Omega^{(2,2)*}$
3.7	0.90089774	0.82921201	0.78945026	0.76225293	0.74150216	0.72468291	0.71052933	0.98690575
3.8	0.89521976	0.82500346	0.78584389	0.75894689	0.73837349	0.72167248	0.70760469	0.98097605
3.9	0.88980006	0.82096453	0.78236895	0.75575354	0.73534696	0.71875763	0.70477109	0.97532751
4.0	0.88461425	0.81708302	0.77901658	0.75266566	0.73241634	0.71593260	0.70202323	0.96993895
4.1	0.87965381	0.81334769	0.77577864	0.74967666	0.72957583	0.71319223	0.69935616	0.96479082
4.2	0.87490764	0.80974903	0.77264787	0.74678059	0.72682026	0.71053164	0.69676551	0.95986544
4.3	0.87035232	0.80627792	0.76961763	0.74397198	0.72414477	0.70794656	0.69424703	0.95514646
4.4	0.86597230	0.80292597	0.76668185	0.74124583	0.72154501	0.70543286	0.69179709	0.95061857
4.5	0.86175561	0.79968564	0.76383499	0.73859757	0.71901691	0.70298691	0.68941206	0.94626864
4.6	0.85769318	0.79655010	0.76107195	0.73602297	0.71655672	0.70060518	0.68708870	0.94208483
4.7	0.85377421	0.79351319	0.75838809	0.73351815	0.71416099	0.69828452	0.68482413	0.93805622
4.8	0.84999456	0.79056912	0.75577912	0.73107956	0.71182653	0.69602196	0.68261547	0.93417280
4.9	0.84634383	0.78771273	0.75324108	0.72870382	0.70955036	0.69381476	0.68046011	0.93042544
5	0.84281354	0.78493952	0.75077033	0.72638792	0.70732973	0.69166044	0.67835565	0.92680619
6	0.81285427	0.76092265	0.72912577	0.70597537	0.68768908	0.67256505	0.65967671	0.89620912
7	0.78978812	0.74182420	0.71162085	0.68932388	0.67159018	0.65686760	0.64429297	0.87275246
8	0.77115143	0.72600688	0.69695069	0.67528837	0.65797787	0.64357010	0.63124604	0.85381806
9	0.75558286	0.71252733	0.68434230	0.66317681	0.64620640	0.63205656	0.61994085	0.83797577
10	0.74223469	0.70079676	0.67330028	0.65253913	0.63585166	0.62192004	0.60998263	0.82436995
20	0.66405281	0.62944509	0.60519146	0.58652602	0.57140344	0.55873123	0.54785312	0.74363086
30	0.62347510	0.59125466	0.56837928	0.55071357	0.53638643	0.52437838	0.51407164	0.70078919
40	0.59627779	0.56544434	0.54345126	0.52645211	0.51266524	0.50111255	0.49119952	0.67169995
50	0.57596616	0.54610667	0.52476590	0.50826839	0.49489105	0.48368462	0.47407140	0.64979124
60	0.55984084	0.53073284	0.50991043	0.49381509	0.48076715	0.46983950	0.46046786	0.63229371
70	0.54652207	0.51802665	0.49763441	0.48187445	0.46910151	0.45840686	0.44923670	0.61777649
80	0.53521100	0.50723298	0.48720820	0.47173560	0.45919842	0.44870342	0.43970638	0.60540410
90	0.52540444	0.49787433	0.47817019	0.46294861	0.45061739	0.44029690	0.43145039	0.59464667
100	0.51676535	0.48963015	0.47021007	0.45521112	0.44306276	0.43289720	0.42418449	0.58514739
200	0.46296112	0.43832021	0.42071111	0.40713202	0.39614770	0.38696530	0.37910221	0.52556475
300	0.43383794	0.41058661	0.39398951	0.38120211	0.37086503	0.36222809	0.35483526	0.49305524
400	0.41418524	0.39188997	0.37598843	0.36374360	0.35384941	0.34558517	0.33851320	0.47103246
T^*	$\Omega^{(2,3)*}$	$\Omega^{(2,4)*}$	$\Omega^{(2,5)*}$	$\Omega^{(2,6)*}$	$\Omega^{(3,3)*}$	$\Omega^{(3,4)*}$	$\Omega^{(3,5)*}$	$\Omega^{(4,4)*}$
3.7	0.93067461	0.89544535	0.87013727	0.85037020	0.88070445	0.84658775	0.82203481	0.93464011
3.8	0.92601967	0.89142414	0.86646749	0.84691616	0.87619607	0.84268685	0.81847895	0.93012585
3.9	0.92156512	0.88756027	0.86293092	0.84358073	0.87188098	0.83893924	0.81505322	0.92580526
4.0	0.91729564	0.88384227	0.85951835	0.84035606	0.86774479	0.83533380	0.81174863	0.92166346
4.1	0.91319746	0.88025985	0.85622148	0.83723505	0.86377411	0.83186053	0.80855706	0.91768708
4.2	0.90925819	0.87680372	0.85303280	0.83421126	0.85995719	0.82851038	0.80547115	0.91386415
4.3	0.90546674	0.87346549	0.84994548	0.83127885	0.85628337	0.82527521	0.80248424	0.91018384
4.4	0.90181294	0.87023757	0.84695332	0.82843246	0.85274294	0.82214777	0.79959026	0.90663639
4.5	0.89828765	0.86711304	0.84405067	0.82566720	0.84932712	0.81912111	0.79678368	0.90321296
4.6	0.89488258	0.86408560	0.84123237	0.82297859	0.84602795	0.81618917	0.79405943	0.89990551
4.7	0.89159019	0.86114950	0.83849366	0.82036249	0.84283808	0.81334635	0.79141289	0.89670672
4.8	0.88840358	0.85829945	0.83583020	0.81781512	0.83975103	0.81058750	0.78883978	0.89360992
4.9	0.88531644	0.85533064	0.83323798	0.81533297	0.83676050	0.80790791	0.78633618	0.89060900
5	0.88232298	0.85283861	0.83071330	0.81291278	0.83386098	0.80530310	0.78389847	0.88769837
6	0.85654973	0.82937384	0.80853723	0.79154957	0.80891308	0.78262759	0.76251500	0.86260235
7	0.83619863	0.81050537	0.79050905	0.77406342	0.78924407	0.76443263	0.74516965	0.84273175
8	0.81939793	0.79472897	0.77532473	0.75927045	0.77303257	0.74924772	0.73058710	0.82628544
9	0.80509669	0.78117621	0.76221439	0.74645986	0.75925378	0.73622396	0.71801542	0.81225329
10	0.79264954	0.76930082	0.75068505	0.73517070	0.74727784	0.72482750	0.70697412	0.80001509
20	0.71644579	0.69554433	0.67855911	0.66427378	0.67429261	0.65434851	0.63817231	0.72458743
30	0.67507284	0.65513376	0.63888735	0.62521359	0.63488403	0.61592387	0.60049842	0.68331752
40	0.64684273	0.62752545	0.61178127	0.59853428	0.60806710	0.58973506	0.57481379	0.65505591
50	0.62555277	0.60670537	0.59134838	0.57843324	0.58787704	0.57001539	0.55547876	0.63369637
60	0.60854523	0.59007918	0.57503914	0.56239643	0.57176719	0.55428446	0.54006052	0.61660850
70	0.59443663	0.57629285	0.56152168	0.54911025	0.55841509	0.54125073	0.52729066	0.60241831
80	0.58241611	0.56455190	0.55001433	0.53780381	0.54704700	0.53015758	0.51642587	0.59031847
90	0.57196833	0.55435118	0.54002015	0.52798715	0.53717186	0.52052451	0.50699402	0.57979498
100	0.56274587	0.54535011	0.53120413	0.51933007	0.52845897	0.51202788	0.49867723	0.57050077
200	0.50498732	0.48905190	0.47612279	0.46529004	0.47396894	0.45895175	0.44677450	0.51220356
300	0.47354227	0.45845471	0.44622782	0.43599273	0.44435102	0.43014706	0.41864148	0.48041234
400	0.45226789	0.43777361	0.42603617	0.41621633	0.42432860	0.41069132	0.39965208	0.45888704