

Exploring the structure and photodissociation mechanism of electronic states of iodocarbene CHI: a theoretical contribution

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Content

Figure S1. Spin-free potential energy curves of CHI calculated at the MRCI-F12/cc-pVTZ-F12 level: (a) along the H-C-I bond angle, (b) along the CH bond length, (c) along the CI bond length. In each figure, the other two geometric parameters were fixed at their respective equilibrium values in ground state.

Figure S2. The potential energy curves of spin-orbit-coupled state of CHI calculated at the MRCI-F12/cc-pVTZ-F12 level: (a) along the H-C-I bond angle, (b) along the CH bond length, (c) along the CI bond length. In each figure, the other two geometric parameters were fixed at their respective equilibrium values in ground state

For the one-dimensional PECs along the CH bond length, the calculated step sizes of electronic states were 0.02 Å for $R_{CH}=1.1-1.7$ Å, 0.05 Å for $R_{CH}=1.7-2.7$ Å and 0.1 Å for $R_{CH}=2.7-4.5$ Å. The calculated step sizes of electronic states were 0.05 Å for $R_{CI}=1.6-1.7$ Å and 2.6-3.6 Å, 0.02 Å for $R_{CI}=1.7-2.6$ Å and 0.1 Å for $R_{CI}=3.6-3.9$ Å. The calculated step sizes of electronic states were 5° for $\theta=70-80^\circ$ and $170-180^\circ$, and 2° for $\theta=80-170^\circ$.

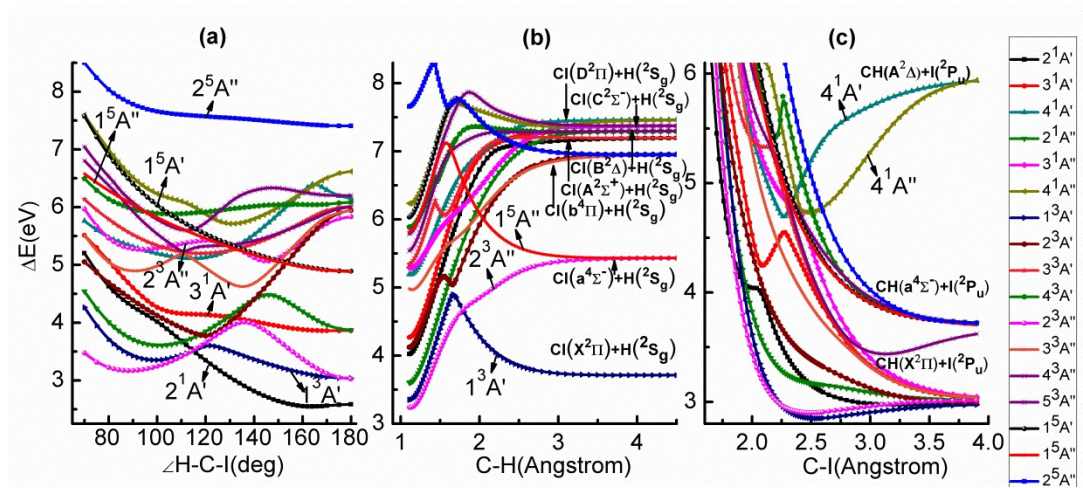


Figure S1

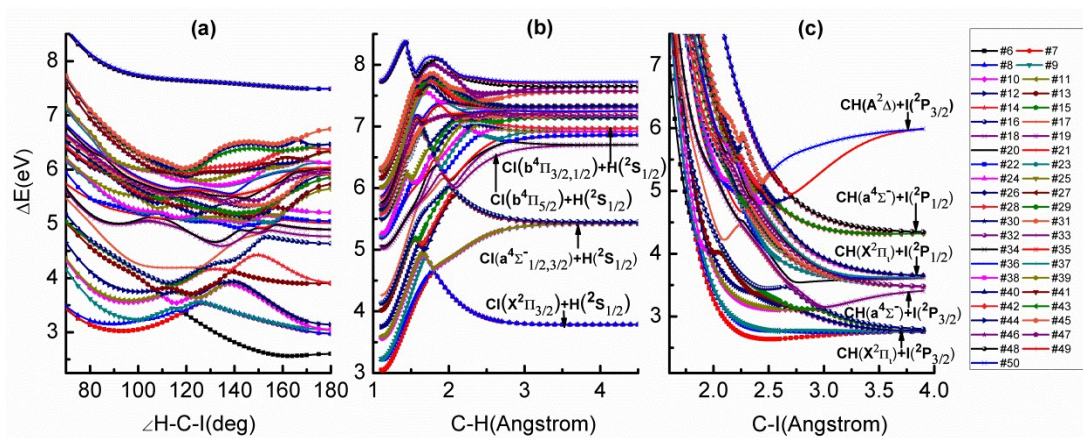


Figure S2

The numerical *ab initio* data of the Figures in the Supplementary Materials was provided in the Tables below.

The spin-free PECs along the bond angle										
	1 ¹ A'	2 ¹ A'	3 ¹ A'	4 ¹ A'	1 ¹ A''	2 ¹ A''	3 ¹ A''	4 ¹ A''	1 ³ A'	2 ³ A'
70	0.84617	5.20278	5.51175	5.76269	2.7082	4.54084	5.96752	7.59487	4.26472	5.05257
75	0.56606	4.88237	5.29524	5.60082	2.49762	4.24294	5.66675	7.28375	3.95158	4.87019
80	0.35047	4.62806	5.06658	5.4764	2.31032	4.00908	5.46246	6.9965	3.71438	4.69638
82	0.2804	4.54256	4.97168	5.43732	2.23963	3.93113	5.40353	6.88585	3.63752	4.63131
84	0.21917	4.4655	4.87578	5.40417	2.17114	3.86174	5.35617	6.77913	3.5703	4.56964
86	0.16631	4.39594	4.78273	5.37322	2.10608	3.8016	5.32048	6.68099	3.51334	4.50897
88	0.1213	4.3331	4.69329	5.34341	2.0444	3.75035	5.29534	6.59224	3.46608	4.44898
90	0.08383	4.27608	4.60736	5.31504	1.98571	3.70746	5.27923	6.51225	3.42775	4.39039
92	0.05361	4.22369	4.52563	5.28797	1.92983	3.67253	5.27089	6.44065	3.39776	4.33358
94	0.03037	4.17424	4.44914	5.26227	1.87671	3.64525	5.26912	6.37717	3.37566	4.27873
96	0.01386	4.12537	4.3788	5.23883	1.82635	3.62532	5.27281	6.3216	3.36103	4.22585
98	0.00383	4.07442	4.31742	5.21698	1.77877	3.61244	5.28086	6.27366	3.35351	4.17495
100	0	4.01606	4.26503	5.19549	1.73186	3.60616	5.29285	6.23107	3.35286	4.12367
102	0.0022	3.95807	4.22871	5.17753	1.69212	3.60656	5.30584	6.19878	3.35829	4.07919
104	0.01005	3.89248	4.20055	5.16046	1.65312	3.61287	5.3208	6.17025	3.36977	4.03435
106	0.02329	3.82388	4.1806	5.14557	1.61706	3.6249	5.33629	6.14579	3.38677	3.99149
108	0.04169	3.75384	4.16677	5.13315	1.58401	3.64236	5.3517	6.12305	3.4089	3.95056
110	0.06504	3.68345	4.1574	5.12347	1.554	3.66496	5.3666	6.09886	3.43576	3.91152
112	0.09315	3.61329	4.15137	5.11688	1.52707	3.69249	5.38069	6.0697	3.46686	3.87451
114	0.12582	3.54419	4.14732	5.11372	1.50327	3.72475	5.39381	6.03297	3.50141	3.83991
116	0.16279	3.47681	4.14402	5.11427	1.4827	3.76165	5.40586	5.98809	3.53796	3.80861
118	0.2039	3.41174	4.14006	5.11859	1.46558	3.8032	5.41671	5.93606	3.57293	3.78317
120	0.24935	3.348	4.13514	5.12786	1.45158	3.84843	5.42429	5.8817	3.59782	3.77265
122	0.29885	3.28506	4.13014	5.14331	1.44028	3.89694	5.42735	5.83083	3.60363	3.78753
124	0.35204	3.22393	4.1241	5.1644	1.43198	3.94846	5.42475	5.78566	3.59096	3.82576
126	0.40864	3.16479	4.11656	5.19116	1.42666	4.00283	5.41415	5.74908	3.56831	3.8786
128	0.46845	3.1078	4.10725	5.22354	1.42431	4.05966	5.393	5.72419	3.54122	3.94019
130	0.53126	3.05302	4.09606	5.26142	1.4249	4.11844	5.36043	5.71251	3.51218	4.00783
132	0.59683	3.00053	4.08311	5.30464	1.42836	4.17849	5.31818	5.71308	3.48245	4.08013
134	0.66487	2.95038	4.06871	5.35296	1.43454	4.23886	5.26971	5.72363	3.45292	4.15611
136	0.73505	2.90258	4.05331	5.40612	1.44322	4.29821	5.21887	5.7419	3.42299	4.23633
138	0.80704	2.85719	4.03727	5.46374	1.45422	4.35465	5.16931	5.76618	3.39363	4.31976
140	0.88052	2.81431	4.02083	5.52539	1.46744	4.40553	5.12475	5.79531	3.36502	4.40604
142	0.95515	2.77404	4.00418	5.59064	1.48279	4.44699	5.0896	5.8285	3.33716	4.49503
144	1.03057	2.73649	3.98751	5.65902	1.50015	4.47414	5.06906	5.86523	3.3101	4.58652
146	1.10638	2.70177	3.97103	5.73008	1.51937	4.48264	5.06757	5.90513	3.28392	4.68034
148	1.18207	2.67002	3.95496	5.8033	1.54024	4.47179	5.08591	5.9479	3.25872	4.77621
150	1.25693	2.64142	3.93955	5.87812	1.56251	4.44349	5.12231	5.99324	3.23452	4.87364
152	1.33039	2.6165	3.92545	5.95432	1.58627	4.40302	5.17221	6.04133	3.2117	4.97227

154	1.40114	2.59515	3.91229	6.03073	1.61096	4.35458	5.23034	6.09136	3.18962	5.07084
156	1.46862	2.57766	3.90046	6.10732	1.63646	4.30185	5.29334	6.14319	3.16859	5.16913
158	1.53221	2.56419	3.89004	6.18425	1.66248	4.24726	5.35873	6.19647	3.14871	5.26668
160	1.5913	2.55485	3.88107	6.26228	1.68866	4.19251	5.42475	6.2507	3.13003	5.36291
162	1.64543	2.5496	3.87358	6.33977	1.71462	4.1389	5.48999	6.30529	3.1126	5.45701
164	1.69385	2.54811	3.86772	6.39451	1.73987	4.08757	5.55313	6.35934	3.09658	5.5478
166	1.73564	2.55006	3.86338	6.39104	1.76391	4.03971	5.61273	6.41168	3.08224	5.63362
168	1.77059	2.55468	3.86059	6.34877	1.78621	3.99646	5.66734	6.46092	3.06988	5.71247
170	1.79899	2.56105	3.85937	6.29701	1.80625	3.95867	5.71569	6.50576	3.05958	5.78228
175	1.844	2.57789	3.8608	6.19053	1.84321	3.89229	5.80243	6.58999	3.04281	5.90454
179.9	1.85762	2.58512	3.86317	6.15203	1.85609	3.87088	5.83165	6.61743	3.03814	5.94439
	3 ³ A'	4 ³ A'	1 ³ A"	2 ³ A"	3 ³ A"	4 ³ A"	5 ³ A"	1 ⁵ A'	1 ⁵ A"	2 ⁵ A"
70	6.13574	6.49238	1.93985	3.47697	5.51288	6.80383	7.04334	7.57451	6.57554	8.49869
75	5.9489	6.28786	1.64146	3.31535	5.23512	6.58813	6.76417	7.2171	6.42352	8.23888
80	5.79024	6.13931	1.36588	3.22353	5.04579	6.37547	6.53254	6.90359	6.28546	8.03459
82	5.73034	6.09382	1.26292	3.20086	4.99217	6.29191	6.43739	6.79179	6.2341	7.96906
84	5.67151	6.05591	1.16473	3.18462	4.9506	6.20516	6.32997	6.68806	6.18515	7.91283
86	5.61706	6.02271	1.07201	3.17467	4.92109	6.11147	6.23342	6.58985	6.13679	7.86323
88	5.56718	5.99323	0.98467	3.17054	4.90274	6.01621	6.1528	6.49644	6.08866	7.81919
90	5.52093	5.96756	0.90251	3.17167	4.8946	5.92415	6.08122	6.40802	6.04119	7.78059
92	5.47787	5.94565	0.82546	3.17762	4.8959	5.83695	6.01517	6.32455	5.99461	7.74711
94	5.4378	5.92732	0.75345	3.1881	4.9059	5.75488	5.95322	6.24584	5.94905	7.71831
96	5.40078	5.91227	0.68642	3.20289	4.92387	5.67773	5.8948	6.17159	5.90458	7.69367
98	5.36681	5.90029	0.62429	3.22181	4.94907	5.60509	5.83976	6.10151	5.86122	7.67269
100	5.33414	5.89109	0.56423	3.24595	4.98246	5.53314	5.78573	6.03214	5.81696	7.65409
102	5.3075	5.88543	0.51436	3.27144	5.01798	5.47134	5.74055	5.9729	5.77812	7.63989
104	5.28249	5.88206	0.46637	3.30183	5.05982	5.40914	5.69747	5.91396	5.73854	7.62727
106	5.2607	5.88113	0.42287	3.33573	5.10503	5.34927	5.65994	5.85832	5.7003	7.61664
108	5.24219	5.88239	0.38376	3.37301	5.152	5.29115	5.62934	5.80567	5.66332	7.60761
110	5.227	5.88556	0.34892	3.41355	5.1981	5.23452	5.60776	5.75571	5.62746	7.59981
112	5.21517	5.89035	0.31824	3.45724	5.17696	5.24195	5.59827	5.70813	5.5926	7.59291
114	5.20683	5.89645	0.2916	3.50395	5.12067	5.27693	5.60467	5.66263	5.55854	7.58656
116	5.2023	5.90332	0.26884	3.55356	5.06383	5.3016	5.62974	5.61871	5.52492	7.58033
118	5.20212	5.90972	0.24992	3.60599	5.00588	5.31658	5.67289	5.57529	5.4909	7.57374
120	5.2042	5.91655	0.23522	3.66026	4.94737	5.32397	5.7299	5.53306	5.45738	7.56792
122	5.20804	5.92572	0.22432	3.71576	4.8899	5.32724	5.7956	5.49378	5.42589	7.56265
124	5.2144	5.93574	0.21706	3.77183	4.83355	5.32946	5.86704	5.45621	5.3953	7.55784
126	5.22369	5.94621	0.21323	3.82763	4.77913	5.33248	5.94104	5.42003	5.3654	7.55288
128	5.23585	5.95675	0.21273	3.88157	4.72807	5.33722	6.0146	5.38499	5.33604	7.5477
130	5.25083	5.96711	0.21547	3.93117	4.68273	5.34419	6.08415	5.35092	5.30716	7.5423
132	5.26852	5.97714	0.22133	3.97272	4.64679	5.35364	6.14553	5.31776	5.27876	7.53667
134	5.28886	5.98686	0.23012	4.00122	4.62526	5.36572	6.19573	5.28561	5.25098	7.5308

136	5.31176	5.99628	0.24159	4.01173	4.62312	5.38051	6.23504	5.2547	5.22396	7.52461
138	5.33712	6.00534	0.25555	4.00198	4.64263	5.3979	6.26608	5.22511	5.19775	7.51804
140	5.36485	6.01383	0.27184	3.97374	4.68204	5.41774	6.29096	5.19678	5.17232	7.51111
142	5.3948	6.02153	0.29033	3.93128	4.73712	5.43985	6.31054	5.16961	5.14761	7.50387
144	5.42684	6.02823	0.31088	3.87897	4.80351	5.46401	6.32467	5.14356	5.12359	7.49641
146	5.46077	6.0338	0.33333	3.82001	4.87806	5.49	6.33272	5.11859	5.10022	7.48881
148	5.49641	6.03816	0.35744	3.756	4.95928	5.51749	6.33406	5.09469	5.07751	7.48116
150	5.53364	6.04132	0.38298	3.69032	5.04368	5.54643	6.32884	5.07188	5.05558	7.47355
152	5.5728	6.04375	0.41	3.62428	5.13058	5.57723	6.31876	5.05063	5.03506	7.46623
154	5.61329	6.04483	0.43778	3.5582	5.21849	5.60922	6.30508	5.03024	5.01544	7.45888
156	5.6551	6.04498	0.46613	3.49307	5.30671	5.64254	6.28977	5.011	4.997	7.45172
158	5.69799	6.04441	0.49471	3.42957	5.39437	5.67702	6.27406	4.99294	4.97974	7.44478
160	5.74163	6.04342	0.52312	3.36831	5.48053	5.71248	6.25881	4.9761	4.9637	7.4381
162	5.78558	6.04232	0.55094	3.30987	5.56405	5.74871	6.24462	4.96053	4.94891	7.43169
164	5.82909	6.04157	0.57768	3.25495	5.64333	5.78553	6.23195	4.94629	4.93545	7.42566
166	5.87094	6.04176	0.6029	3.20442	5.71597	5.82296	6.22117	4.93354	4.92346	7.42021
168	5.90953	6.04361	0.62615	3.15921	5.77881	5.86147	6.21249	4.9224	4.91306	7.41557
170	5.94311	6.04794	0.64695	3.11999	5.82923	5.90105	6.2061	4.91296	4.90431	7.41182
175	5.99625	6.07076	0.68513	3.05118	5.90887	5.98001	6.20046	4.89699	4.88968	7.40618
179.9	6.00955	6.08463	0.69875	3.02801	5.93965	5.99874	6.20088	4.89217	4.88522	7.40497

The spin-free PECs of CHI along the CH bond length										
	1 ¹ A'	2 ¹ A'	3 ¹ A'	4 ¹ A'	1 ¹ A"	2 ¹ A"	3 ¹ A"	4 ¹ A"	1 ³ A'	2 ³ A'
1.108	0	4.02027	4.26849	5.19324	1.73562	3.60636	5.29465	6.23429	3.3521	4.12426
1.12	0.00119	4.02506	4.27121	5.19038	1.73776	3.60711	5.29034	6.23243	3.35222	4.12807
1.14	0.01186	4.04161	4.28454	5.19399	1.74981	3.61692	5.29057	6.23817	3.36099	4.14296
1.16	0.03232	4.06774	4.30781	5.20696	1.77135	3.63634	5.2989	6.25388	3.37941	4.16741
1.18	0.06142	4.10229	4.33988	5.2281	1.8012	3.66426	5.3141	6.27845	3.40633	4.20022
1.2	0.09812	4.1442	4.37973	5.25633	1.83828	3.69963	5.33504	6.31085	3.44073	4.2403
1.22	0.14149	4.19251	4.42641	5.29067	1.88163	3.74154	5.36071	6.35018	3.48167	4.28664
1.24	0.19069	4.24637	4.47909	5.33021	1.93037	3.78915	5.39022	6.3956	3.52834	4.33833
1.26	0.24497	4.305	4.53702	5.37415	1.98368	3.84171	5.42275	6.44636	3.57997	4.39449
1.28	0.30363	4.3677	4.59949	5.42172	2.04083	3.89856	5.45758	6.50179	3.63589	4.45433
1.3	0.36606	4.43383	4.66588	5.47224	2.10116	3.95909	5.49405	6.56123	3.69548	4.51705
1.32	0.43166	4.50281	4.7356	5.52506	2.16404	4.02274	5.53159	6.62411	3.75817	4.5819
1.34	0.49994	4.57411	4.80813	5.57958	2.2289	4.08901	5.5697	6.6899	3.82346	4.6481
1.36	0.57043	4.64727	4.88302	5.63526	2.29525	4.15746	5.60796	6.75811	3.8909	4.71489
1.38	0.64275	4.72187	4.95984	5.69158	2.36263	4.2277	5.64602	6.82832	3.96008	4.78139
1.4	0.71655	4.79758	5.03824	5.74808	2.43064	4.29938	5.68362	6.90017	4.03068	4.84663
1.42	0.79115	4.87372	5.11766	5.80395	2.49859	4.37196	5.72034	6.97304	4.10197	4.90892
1.44	0.8669	4.95042	5.19823	5.85943	2.56661	4.44546	5.75634	7.04709	4.174	4.96684

1.46	0.94458	5.03122	5.28417	5.93009	2.63566	4.52074	5.79308	7.12646	4.24659	5.02656
1.48	1.02012	5.10806	5.36408	5.98812	2.70139	4.59407	5.82491	7.19789	4.31833	5.07614
1.5	1.09526	5.18426	5.4439	6.04369	2.76579	4.66737	5.85511	7.26898	4.38983	5.1157
1.52	1.1708	5.26053	5.52366	6.09807	2.82921	4.74091	5.8844	7.33975	4.46165	5.14458
1.54	1.24581	5.33606	5.60246	6.15092	2.8908	4.81409	5.91222	7.40895	4.53271	5.16048
1.56	1.32046	5.41098	5.68009	6.20233	2.95056	4.88689	5.93884	7.47619	4.60303	5.1624
1.58	1.39801	5.48842	5.75353	6.25433	3.00943	4.96157	5.96625	7.53867	4.6757	5.14014
1.6	1.47105	5.56217	5.82817	6.30666	3.06454	5.03278	5.99002	7.59865	4.74211	5.11858
1.62	1.54327	5.63503	5.90281	6.35674	3.11758	5.10373	6.01304	7.6552	4.80533	5.08836
1.64	1.61566	5.70812	5.98263	6.40377	3.16982	5.17701	6.03696	7.70313	4.86154	5.05026
1.66	1.68524	5.77832	6.0521	6.45115	3.21678	5.24555	6.05793	7.7204	4.89532	5.04005
1.68	1.75359	5.84725	6.12015	6.49617	3.26156	5.3131	6.0784	7.72036	4.89043	5.06507
1.7	1.8207	5.91488	6.18679	6.53903	3.30405	5.37958	6.09878	7.71436	4.85918	5.11399
1.75	1.98267	6.07785	6.34583	6.63765	3.3992	5.54081	6.15074	7.69338	4.75356	5.25859
1.8	2.13597	6.23086	6.4917	6.72375	3.47854	5.69433	6.20582	7.67199	4.6443	5.40541
1.85	2.28022	6.37288	6.62204	6.79766	3.54292	5.83956	6.26509	7.65185	4.54185	5.54627
1.9	2.41525	6.50357	6.73542	6.86123	3.59381	5.97615	6.32859	7.63261	4.44774	5.67956
1.95	2.541	6.62262	6.83149	6.91643	3.63294	6.10392	6.39571	7.61373	4.36215	5.8047
2	2.65751	6.72947	6.91109	6.96485	3.66217	6.2228	6.46546	7.59484	4.28476	5.9215
2.05	2.76507	6.82317	6.97578	7.00871	3.6834	6.33294	6.53681	7.57585	4.2152	6.03006
2.1	2.86405	6.90197	7.02632	7.05243	3.69842	6.43459	6.60866	7.55691	4.15304	6.13059
2.15	2.9548	6.96341	7.06574	7.09892	3.70868	6.528	6.67993	7.53818	4.09773	6.22332
2.2	3.0376	7.00669	7.09969	7.14658	3.7153	6.61341	6.74957	7.5198	4.04863	6.30861
2.25	3.1127	7.03532	7.12957	7.19331	3.71913	6.69115	6.81658	7.50191	4.00505	6.38577
2.3	3.1805	7.05469	7.15518	7.23657	3.72087	6.76177	6.88003	7.48463	3.96645	6.45471
2.35	3.24165	7.06886	7.17682	7.27491	3.72137	6.82593	6.93949	7.46819	3.93251	6.51709
2.4	3.29648	7.07988	7.19484	7.30772	3.72093	6.88401	6.99453	7.45265	3.90266	6.57274
2.45	3.34547	7.08897	7.20982	7.33516	3.71988	6.93639	7.04506	7.4381	3.87646	6.62204
2.5	3.38908	7.09683	7.22226	7.35776	3.71847	6.98342	7.09084	7.42492	3.85353	6.66547
2.55	3.4278	7.10387	7.23259	7.37616	3.71687	7.02549	7.13212	7.41304	3.8335	6.70353
2.6	3.46208	7.11035	7.24116	7.39103	3.71521	7.06294	7.16934	7.40221	3.81605	6.73675
2.65	3.49236	7.1164	7.2483	7.40299	3.71359	7.09614	7.2027	7.3925	3.80087	6.76563
2.7	3.51905	7.12209	7.25424	7.41258	3.71206	7.12545	7.23245	7.38391	3.78771	6.79126
2.8	3.56315	7.13255	7.26335	7.42644	3.70939	7.17369	7.28225	7.37002	3.76647	6.83089
2.9	3.59708	7.14184	7.2698	7.43543	3.70732	7.21013	7.32076	7.36051	3.75069	6.86085
3	3.62317	7.15002	7.27445	7.4414	3.70584	7.23688	7.34606	7.35911	3.73908	6.88312
3.1	3.64293	7.15712	7.27788	7.44549	3.70486	7.25572	7.34812	7.37731	3.73062	6.89976
3.2	3.65809	7.16322	7.28048	7.44843	3.70429	7.26831	7.34818	7.39487	3.72454	6.91227
3.3	3.66967	7.16842	7.28252	7.45064	3.70405	7.27629	7.34975	7.40869	3.72023	6.92175
3.4	3.67852	7.17282	7.28415	7.45238	3.70404	7.28119	7.35227	7.41944	3.71724	6.929
3.5	3.68531	7.17652	7.28549	7.45381	3.70419	7.28419	7.35509	7.42778	3.71521	6.93459
3.6	3.69053	7.17962	7.28661	7.45502	3.70446	7.28611	7.35779	7.43425	3.71389	6.93894
3.7	3.69456	7.1822	7.28758	7.45605	3.70479	7.28742	7.3602	7.43929	3.71307	6.94236

3.8	3.69769	7.18435	7.2884	7.45695	3.70515	7.28837	7.36224	7.44322	3.7126	6.94505
3.9	3.70012	7.18613	7.28912	7.45774	3.70552	7.2891	7.36395	7.4463	3.71238	6.94719
4	3.70203	7.18761	7.28975	7.45844	3.70589	7.28969	7.36536	7.44871	3.71232	6.9489
4.1	3.70352	7.18884	7.29029	7.45904	3.70624	7.29019	7.36651	7.4506	3.71237	6.95027
4.2	3.70471	7.18985	7.29077	7.45958	3.70657	7.29062	7.36745	7.4521	3.71249	6.95138
4.3	3.70564	7.19068	7.29118	7.46004	3.70688	7.29099	7.36822	7.45329	3.71265	6.95228
4.4	3.70639	7.19138	7.29154	7.46045	3.70715	7.29132	7.36885	7.45424	3.71282	6.95301
4.5	3.707	7.19195	7.29186	7.46081	3.7074	7.29161	7.36936	7.45499	3.713	6.95361
	3 ³ A'	4 ³ A'	1 ³ A"	2 ³ A"	3 ³ A"	4 ³ A"	5 ³ A"	1 ⁵ A'	1 ⁵ A"	2 ⁵ A"
1.108	5.33923	5.88761	0.56795	3.24413	4.98241	5.53763	5.78854	6.03321	5.81707	7.65547
1.12	5.34653	5.88609	0.57596	3.24034	4.97368	5.5462	5.79497	6.04218	5.82347	7.65894
1.14	5.36715	5.89196	0.59802	3.2424	4.96707	5.56899	5.8143	6.06563	5.8426	7.67282
1.16	5.39721	5.90726	0.62987	3.25382	4.96925	5.6013	5.84332	6.09859	5.87118	7.69565
1.18	5.43552	5.93085	0.67035	3.27345	4.97901	5.64194	5.88085	6.13989	5.90805	7.72619
1.2	5.48098	5.96169	0.71841	3.30025	4.99527	5.68979	5.92587	6.18847	5.95216	7.76327
1.22	5.5326	5.99883	0.77311	3.33328	5.01701	5.74385	5.97742	6.24335	6.00253	7.80584
1.24	5.58955	6.04139	0.8336	3.37169	5.04334	5.80321	6.03468	6.30366	6.05828	7.85288
1.26	5.651	6.08857	0.8991	3.41468	5.07341	5.86701	6.09688	6.36861	6.1186	7.90344
1.28	5.7162	6.13966	0.96891	3.46157	5.10648	5.93445	6.16336	6.43745	6.18275	7.95658
1.3	5.78444	6.19403	1.04238	3.51171	5.14184	6.00477	6.23351	6.50949	6.25003	8.01135
1.32	5.85505	6.25108	1.11892	3.56451	5.17885	6.07724	6.30681	6.58407	6.31979	8.06674
1.34	5.92736	6.31026	1.198	3.61944	5.21694	6.15116	6.3828	6.6606	6.39141	8.12162
1.36	6.00074	6.37105	1.27914	3.67598	5.25559	6.22582	6.46109	6.73852	6.46428	8.17454
1.38	6.07444	6.43299	1.36193	3.73371	5.29434	6.3005	6.54134	6.8173	6.53779	8.22348
1.4	6.14753	6.49569	1.44597	3.7922	5.33279	6.37443	6.62326	6.89642	6.61131	8.26499
1.42	6.21823	6.55849	1.53064	3.85077	5.37033	6.4464	6.70613	6.97507	6.68388	8.29198
1.44	6.28201	6.62184	1.61617	3.90932	5.40691	6.51581	6.78963	7.05349	6.75531	8.28776
1.46	6.20098	6.55443	1.70331	3.96781	5.44226	6.59371	6.86742	7.14761	6.84186	8.15079
1.48	6.15883	6.59348	1.78846	4.02479	5.47427	6.66067	6.94481	7.22632	6.91176	8.05967
1.5	6.11812	6.65058	1.87293	4.08072	5.5042	6.723	7.02245	7.30175	6.97611	7.9665
1.52	6.08656	6.71308	1.95733	4.13574	5.53257	6.781	7.0995	7.37505	7.03398	7.87811
1.54	6.06719	6.77631	2.04073	4.18925	5.55891	6.83379	7.17432	7.44499	7.08225	7.79845
1.56	6.06214	6.83796	2.12314	4.24112	5.58344	6.88076	7.24609	7.51107	7.11621	7.73255
1.58	6.07173	6.88605	2.20521	4.29359	5.60771	6.91381	7.301	7.57262	7.12308	7.67872
1.6	6.09579	6.93964	2.28503	4.34106	5.6281	6.95089	7.36103	7.63074	7.11279	7.66029
1.62	6.12949	6.99367	2.36339	4.38653	5.64719	6.98103	7.42133	7.68057	7.07803	7.66345
1.64	6.16545	7.05686	2.44085	4.43177	5.66615	7.00021	7.49222	7.7182	7.019	7.67835
1.66	6.21673	7.09913	2.51532	4.47178	5.68345	7.02347	7.5396	7.74884	6.96179	7.70499
1.68	6.27149	7.13912	2.58784	4.50921	5.70072	7.04351	7.58746	7.76833	6.9004	7.73036
1.7	6.328	7.17652	2.6583	4.54404	5.71828	7.06115	7.63551	7.77714	6.83745	7.75003
1.75	6.46927	7.25547	2.82461	4.61987	5.76536	7.09943	7.74835	7.76199	6.68254	7.76157
1.8	6.6011	7.31052	2.97556	4.68131	5.81946	7.13399	7.83268	7.71427	6.53825	7.72611

1.85	6.71861	7.34288	3.11006	4.73123	5.88102	7.16506	7.87083	7.65268	6.40695	7.66737
1.9	6.82084	7.35801	3.2276	4.77392	5.94856	7.19356	7.8632	7.58729	6.28881	7.60141
1.95	6.90781	7.36201	3.3281	4.81306	6.0198	7.21858	7.82819	7.52295	6.1832	7.5355
2	6.97997	7.35955	3.41197	4.85131	6.0924	7.23952	7.78198	7.4619	6.08911	7.4727
2.05	7.0384	7.35384	3.48041	4.89032	6.16452	7.2562	7.73404	7.40522	6.00558	7.41435
2.1	7.08458	7.34683	3.53513	4.93069	6.23475	7.26879	7.68915	7.3534	5.93172	7.36096
2.15	7.12018	7.33961	3.57807	4.97213	6.30206	7.27755	7.64955	7.30651	5.86658	7.31262
2.2	7.14669	7.33266	3.61116	5.01384	6.36574	7.28275	7.6162	7.26435	5.80918	7.26918
2.25	7.16652	7.32618	3.63619	5.0548	6.42524	7.28474	7.58878	7.22655	5.75859	7.23026
2.3	7.18136	7.32028	3.65481	5.09418	6.48015	7.28435	7.56533	7.19264	5.71412	7.19535
2.35	7.19138	7.3151	3.6687	5.13138	6.53052	7.28259	7.54412	7.16245	5.67532	7.16421
2.4	7.19796	7.31057	3.67888	5.16588	6.57614	7.28025	7.52445	7.13557	5.64145	7.13642
2.45	7.20206	7.30662	3.68628	5.19788	6.61732	7.27879	7.50487	7.11171	5.61193	7.11169
2.5	7.2044	7.30322	3.69162	5.2268	6.65451	7.27773	7.48665	7.09061	5.58624	7.08978
2.55	7.20551	7.30032	3.69546	5.2524	6.68782	7.27675	7.47084	7.07201	5.56392	7.07043
2.6	7.20577	7.29785	3.6982	5.27501	6.71759	7.27613	7.45697	7.05568	5.54456	7.0534
2.65	7.20548	7.29577	3.70016	5.295	6.74412	7.27606	7.44455	7.04137	5.5278	7.03845
2.7	7.20484	7.29337	3.70156	5.31259	6.7677	7.27643	7.43352	7.02886	5.51331	7.02535
2.8	7.20308	7.29157	3.70329	5.34139	6.80712	7.27802	7.41549	7.00849	5.49006	7.00395
2.9	7.20118	7.29	3.70426	5.36316	6.8379	7.28012	7.40217	6.99317	5.47288	6.98778
3	7.1995	7.28914	3.70491	5.37956	6.86183	7.28223	7.3926	6.98176	5.46031	6.97568
3.1	7.19815	7.2888	3.70545	5.39194	6.88041	7.28411	7.38589	6.97337	5.4512	6.96672
3.2	7.19715	7.28884	3.70598	5.40135	6.89481	7.28572	7.38129	6.96726	5.44467	6.96016
3.3	7.19648	7.28913	3.70652	5.40854	6.906	7.28709	7.37823	6.96289	5.44005	6.95542
3.4	7.19607	7.2896	3.70708	5.41404	6.91469	7.28827	7.37625	6.95983	5.43684	6.95205
3.5	7.19588	7.29017	3.70765	5.41829	6.92147	7.28932	7.37504	6.95772	5.43466	6.94971
3.6	7.19585	7.2908	3.70822	5.42158	6.92676	7.29025	7.37435	6.95633	5.43322	6.94812
3.7	7.19594	7.29144	3.70878	5.42415	6.93091	7.2911	7.37402	6.95545	5.43232	6.94708
3.8	7.19611	7.29207	3.7093	5.42617	6.93418	7.29186	7.37394	6.95493	5.43179	6.94644
3.9	7.19632	7.29267	3.7098	5.42776	6.93675	7.29255	7.374	6.95467	5.43152	6.94608
4	7.19656	7.29323	3.71025	5.42903	6.93879	7.29317	7.37416	6.95459	5.43143	6.94592
4.1	7.19681	7.29375	3.71067	5.43004	6.94041	7.29372	7.37438	6.95462	5.43145	6.94589
4.2	7.19706	7.29421	3.71105	5.43086	6.94171	7.29421	7.37461	6.95473	5.43154	6.94594
4.3	7.19731	7.29462	3.71139	5.43152	6.94274	7.29465	7.37486	6.95488	5.43167	6.94605
4.4	7.19753	7.29499	3.71169	5.43205	6.94357	7.29503	7.3751	6.95506	5.43182	6.9462
4.5	7.19775	7.29531	3.71196	5.43249	6.94425	7.29537	7.37533	6.95524	5.43199	6.94635

The spin-free PECs of CHI along the CI bond length										
	1 ¹ A'	2 ¹ A'	3 ¹ A'	4 ¹ A'	1 ¹ A''	2 ¹ A''	3 ¹ A''	4 ¹ A''	1 ³ A'	2 ³ A'
1.6	3.99683	7.16662	8.41083	11.03513	5.36853	8.48748	9.82883	11.01162	8.13428	9.07537
1.65	2.89356	6.17998	7.54096	9.74195	4.3181	7.336	9.00973	9.70197	7.22254	7.76497

1.7	2.04852	5.45229	6.84132	8.65018	3.52449	6.43036	8.34458	8.66331	6.49402	6.71756
1.72	1.76861	5.21862	6.60852	8.2624	3.26432	6.12271	8.11652	8.31567	6.24759	6.36119
1.74	1.51783	5.01351	6.39764	7.9026	3.03273	5.84218	7.88543	8.02321	6.0075	6.05135
1.76	1.29378	4.8345	6.20534	7.57052	2.8273	5.58638	7.62527	7.80687	5.72262	5.83407
1.78	1.09429	4.67931	6.02844	7.26576	2.64583	5.35314	7.36208	7.63597	5.44908	5.64861
1.8	0.91736	4.54585	5.8639	6.98782	2.48629	5.1405	7.1149	7.4871	5.19759	5.48012
1.82	0.76116	4.43219	5.70888	6.73619	2.34681	4.94666	6.88698	7.35301	4.96723	5.32582
1.84	0.62401	4.33657	5.56089	6.51023	2.22568	4.77	6.67807	7.23017	4.7565	5.18389
1.86	0.50434	4.25733	5.4179	6.30902	2.12134	4.60905	6.48711	7.11614	4.56389	5.05287
1.88	0.40075	4.19297	5.27853	6.13127	2.03235	4.4625	6.31289	7.00892	4.38801	4.93152
1.9	0.31191	4.14206	5.14212	5.97518	1.95739	4.32913	6.15415	6.90695	4.22758	4.81879
1.92	0.23662	4.10326	5.00882	5.83839	1.89524	4.20785	6.00969	6.80915	4.08138	4.71378
1.94	0.17375	4.07533	4.87937	5.71817	1.84478	4.09765	5.87838	6.71501	3.94832	4.61571
1.96	0.12222	4.05687	4.75492	5.61175	1.80495	3.99759	5.75913	6.62459	3.82734	4.52392
1.98	0.08104	4.04602	4.63707	5.51661	1.77476	3.90679	5.65089	6.53833	3.71745	4.4378
2	0.04926	4.04127	4.52706	5.43058	1.7533	3.82444	5.55269	6.45688	3.61769	4.35686
2.02	0.02595	4.04017	4.42697	5.35197	1.73975	3.74977	5.46362	6.38091	3.52713	4.28071
2.04	0.01019	4.0379	4.34111	5.27971	1.73333	3.68207	5.38281	6.31111	3.44485	4.2092
2.066	0	4.01776	4.26552	5.19345	1.73444	3.60367	5.28902	6.23021	3.34949	4.12305
2.08	-0.00078	3.99215	4.24843	5.14886	1.73923	3.56599	5.24377	6.19135	3.30384	4.07897
2.1	0.00319	3.93942	4.25061	5.08594	1.75103	3.51758	5.18534	6.1417	3.24527	4.01789
2.12	0.01315	3.87713	4.27184	5.02597	1.7673	3.47414	5.13233	6.09524	3.19273	3.96123
2.14	0.02827	3.8129	4.30492	4.96752	1.78803	3.43562	5.08505	6.04559	3.14601	3.90786
2.16	0.04802	3.74995	4.34479	4.91135	1.81257	3.40154	5.04257	5.97778	3.10469	3.85795
2.18	0.07228	3.6904	4.3861	4.85962	1.8392	3.37045	5.00265	5.88686	3.06748	3.81272
2.2	0.10043	3.63461	4.42907	4.81056	1.868	3.34246	4.96574	5.78315	3.03431	3.77085
2.22	0.13202	3.58254	4.47261	4.76433	1.89882	3.31751	4.93192	5.6747	3.00494	3.73159
2.24	0.16665	3.53412	4.51383	4.72304	1.93138	3.29543	4.9011	5.56574	2.97916	3.69379
2.26	0.20399	3.4892	4.54477	4.69407	1.96542	3.27607	4.87324	5.45815	2.9567	3.65808
2.28	0.24363	3.44777	4.5475	4.69488	2.00088	3.25958	4.84849	5.35224	2.93751	3.62522
2.3	0.28526	3.40994	4.51843	4.7289	2.03777	3.24616	4.8271	5.24785	2.92194	3.59341
2.32	0.32905	3.3748	4.47786	4.77486	2.0746	3.23385	4.80748	5.14829	2.90804	3.56503
2.34	0.37462	3.34211	4.43414	4.824	2.11129	3.22268	4.78985	5.05303	2.89579	3.53934
2.36	0.42168	3.31186	4.38913	4.87434	2.14787	3.21286	4.77451	4.96146	2.88533	3.51562
2.38	0.47002	3.2839	4.34362	4.92491	2.1842	3.2043	4.76145	4.87344	2.87654	3.49358
2.4	0.51943	3.25809	4.29801	4.97513	2.2201	3.19686	4.75034	4.78925	2.86927	3.47305
2.42	0.56975	3.23427	4.25253	5.02459	2.25539	3.1904	4.70624	4.74373	2.86338	3.45389
2.44	0.62081	3.21229	4.20737	5.07296	2.28993	3.18478	4.62853	4.73746	2.8587	3.43593
2.46	0.67246	3.19201	4.16268	5.11995	2.32357	3.17985	4.55347	4.73407	2.85512	3.41907
2.48	0.72458	3.17331	4.11859	5.1653	2.35622	3.17551	4.48138	4.73314	2.8525	3.40318
2.5	0.77702	3.15607	4.07519	5.20875	2.38776	3.17162	4.41225	4.7346	2.85074	3.38815
2.52	0.82968	3.14018	4.03259	5.25009	2.41813	3.16809	4.34598	4.73841	2.84973	3.37387
2.54	0.88243	3.12553	3.99087	5.2891	2.44728	3.16483	4.28249	4.74453	2.84939	3.36025

2.56	0.93519	3.11204	3.95011	5.32562	2.47518	3.16175	4.22169	4.75291	2.84965	3.34719
2.58	0.98785	3.09963	3.91036	5.35953	2.50182	3.15878	4.16349	4.76348	2.85043	3.33463
2.6	1.04031	3.08821	3.87169	5.39079	2.52723	3.15588	4.1078	4.77615	2.85169	3.32248
2.65	1.16997	3.06368	3.77992	5.45783	2.58558	3.14874	3.97881	4.81639	2.85673	3.29346
2.7	1.29678	3.04394	3.69545	5.51013	2.63651	3.14138	3.86359	4.86733	2.8635	3.26578
2.75	1.42048	3.02781	3.61807	5.55121	2.67964	3.13303	3.76131	4.92682	2.87042	3.23941
2.8	1.5401	3.01483	3.54746	5.58637	2.71622	3.12389	3.67048	4.99273	2.87744	3.21408
2.85	1.65493	3.00382	3.48414	5.61828	2.74738	3.11431	3.58988	5.06298	2.88428	3.19001
2.9	1.76448	2.99498	3.42714	5.64801	2.77402	3.10457	3.51848	5.13565	2.89102	3.1671
2.95	1.86847	2.98815	3.37597	5.676	2.79693	3.09499	3.45538	5.20909	2.89772	3.14545
3	1.96674	2.98302	3.33039	5.70239	2.81684	3.08584	3.39981	5.28192	2.90436	3.12534
3.05	2.05917	2.97933	3.28997	5.72716	2.83428	3.0773	3.35098	5.35294	2.91087	3.10691
3.1	2.14562	2.97674	3.25419	5.75023	2.84959	3.06937	3.30807	5.42115	2.91712	3.09013
3.15	2.22604	2.97504	3.22256	5.77154	2.86307	3.06206	3.27039	5.48574	2.92306	3.075
3.2	2.30052	2.97406	3.19468	5.79114	2.87501	3.0554	3.23735	5.54617	2.92874	3.06149
3.25	2.3692	2.97367	3.17016	5.80907	2.88562	3.04938	3.20841	5.60202	2.93402	3.04953
3.3	2.43225	2.97377	3.14865	5.82543	2.89513	3.04399	3.18311	5.65304	2.93888	3.03907
3.35	2.4899	2.97426	3.12982	5.84031	2.90367	3.03921	3.16101	5.69911	2.94349	3.03003
3.4	2.54241	2.97508	3.11337	5.85382	2.91138	3.03499	3.14173	5.74018	2.94779	3.02229
3.45	2.59006	2.97614	3.09903	5.86604	2.91836	3.03128	3.12492	5.77637	2.95179	3.01575
3.5	2.63314	2.97739	3.08655	5.8771	2.9247	3.02805	3.11029	5.80786	2.95547	3.01032
3.55	2.67198	2.97879	3.0757	5.88707	2.93051	3.02526	3.09756	5.83495	2.95884	3.00589
3.6	2.70687	2.98029	3.06628	5.89606	2.93584	3.02288	3.08652	5.85804	2.96189	3.00239
3.7	2.76611	2.98346	3.05109	5.91144	2.94523	3.01912	3.06864	5.89398	2.96698	2.99785
3.8	2.81331	2.98668	3.03983	5.92389	2.95319	3.0164	3.05522	5.91953	2.97075	2.99612
3.9	2.85072	2.98987	3.03163	5.93403	2.96003	3.01451	3.04523	5.93851	2.97351	2.9965
	3 ³ A'	4 ³ A'	1 ³ A"	2 ³ A"	3 ³ A"	4 ³ A"	5 ³ A"	1 ⁵ A'	1 ⁵ A"	2 ⁵ A"
1.6	9.1348	11.3182	4.43659	7.99611	9.58254	10.75277	11.58345	12.35653	11.03844	14.39985
1.65	8.06878	10.24561	3.35119	6.85625	8.70888	9.44424	10.13332	11.08692	10.00527	13.17442
1.7	7.26524	9.35341	2.52325	5.96286	8.00558	8.41282	9.03559	10.03676	9.14683	12.15561
1.72	7.00122	9.0423	2.24973	5.66027	7.76647	8.06153	8.66223	9.67007	8.84689	11.79425
1.74	6.76571	8.75374	2.00508	5.38488	7.54563	7.74149	8.32255	9.32975	8.56814	11.45487
1.76	6.55621	8.48551	1.78695	5.13434	7.33837	7.45202	8.01436	9.0133	8.30848	11.13499
1.78	6.3704	8.23559	1.59317	4.90652	7.13222	7.20033	7.73601	8.71847	8.06605	10.83242
1.8	6.20617	8.00218	1.42175	4.69943	6.90941	6.9994	7.4861	8.44329	7.83923	10.54528
1.82	6.06158	7.78364	1.27088	4.5113	6.68919	6.82589	7.26306	8.18597	7.62661	10.2719
1.84	5.93486	7.57852	1.13888	4.34049	6.4834	6.66482	7.06492	7.94496	7.42694	10.01084
1.86	5.82438	7.3855	1.02423	4.18553	6.29288	6.51334	6.88908	7.71888	7.23911	9.76084
1.88	5.72862	7.20343	0.92551	4.04506	6.11664	6.37131	6.73244	7.5065	7.06216	9.52083
1.9	5.64623	7.03126	0.84141	3.91784	5.95348	6.23937	6.5918	7.30673	6.89524	9.28988
1.92	5.57594	6.86808	0.77074	3.80275	5.80224	6.11812	6.46427	7.11861	6.73757	9.06724
1.94	5.51661	6.71307	0.71239	3.69875	5.66193	6.0078	6.34748	6.94127	6.58849	8.85224

1.96	5.46716	6.56549	0.6653	3.60488	5.53161	5.90827	6.23965	6.77392	6.44737	8.64434
1.98	5.42662	6.42469	0.62851	3.52022	5.41047	5.81905	6.13949	6.61584	6.31364	8.44308
2	5.39413	6.29009	0.6011	3.44394	5.29774	5.73943	6.04617	6.46639	6.18683	8.24808
2.02	5.36896	6.16124	0.58223	3.37525	5.19268	5.66857	5.95932	6.32507	6.06655	8.05907
2.04	5.3505	6.03794	0.57114	3.31338	5.09458	5.60562	5.87908	6.19164	5.95271	7.87592
2.066	5.3354	5.88596	0.5672	3.24236	4.97657	5.5341	5.78498	6.02951	5.81406	7.64643
2.08	5.33139	5.80734	0.56952	3.20861	4.91742	5.4996	5.73921	5.94649	5.74281	7.5262
2.1	5.3305	5.69826	0.57781	3.16567	4.838	5.45367	5.68192	5.83203	5.64436	7.35796
2.12	5.33116	5.5957	0.59208	3.12745	4.76345	5.40973	5.63714	5.72389	5.55117	7.19577
2.14	5.33116	5.50246	0.61192	3.09382	4.69351	5.36694	5.607	5.62092	5.46224	7.03851
2.16	5.31317	5.43506	0.63653	3.06429	4.62807	5.31779	5.54718	5.52325	5.3776	6.88654
2.18	5.25385	5.41446	0.66495	3.03784	4.56605	5.26379	5.4497	5.43216	5.29827	6.74139
2.2	5.17526	5.42065	0.69692	3.01449	4.50718	5.20958	5.34695	5.34629	5.22318	6.6019
2.22	5.09354	5.44595	0.73212	2.99408	4.45124	5.15618	5.2462	5.26497	5.15184	6.46763
2.24	5.01172	5.57547	0.77022	2.97638	4.398	5.10387	5.14877	5.18783	5.08394	6.33834
2.26	4.92982	5.79175	0.81089	2.96125	4.34724	5.05257	5.05479	5.11448	5.01921	6.21378
2.28	4.85102	5.72179	0.85373	2.94889	4.29877	4.96321	5.00218	5.04425	4.95717	6.09329
2.3	4.77372	5.61795	0.89842	2.93966	4.25254	4.87354	4.95202	4.97648	4.89742	5.97636
2.32	4.70024	5.51435	0.94526	2.93133	4.20869	4.78833	4.90423	4.91296	4.84106	5.86529
2.34	4.62994	5.41464	0.99361	2.92389	4.16581	4.70829	4.85834	4.85313	4.78764	5.75942
2.36	4.56222	5.31909	1.04327	2.91765	4.12402	4.63226	4.8139	4.7964	4.73677	5.65813
2.38	4.49692	5.22776	1.09413	2.9126	4.08402	4.55904	4.7708	4.74251	4.68826	5.56119
2.4	4.43392	5.14064	1.14594	2.90862	4.04556	4.48871	4.72896	4.69126	4.64197	5.46842
2.42	4.37315	5.05768	1.1985	2.90561	4.00848	4.42124	4.68833	4.64251	4.59779	5.37968
2.44	4.31454	4.97879	1.25163	2.90345	3.97272	4.35654	4.6489	4.59613	4.5556	5.29484
2.46	4.25801	4.90389	1.30518	2.90204	3.93822	4.29454	4.61064	4.55198	4.5153	5.21376
2.48	4.20351	4.83286	1.35899	2.9013	3.90493	4.23516	4.57352	4.50994	4.47681	5.1363
2.5	4.15098	4.7656	1.41293	2.90115	3.87281	4.1783	4.53752	4.46992	4.44003	5.06235
2.52	4.10035	4.70198	1.46685	2.90151	3.84184	4.1239	4.50264	4.43181	4.40489	4.99177
2.54	4.05156	4.64188	1.52064	2.90231	3.81198	4.07187	4.46885	4.39551	4.37132	4.92442
2.56	4.00457	4.58518	1.57417	2.90352	3.78319	4.02215	4.43616	4.36094	4.33924	4.86019
2.58	3.9593	4.53173	1.62735	2.90509	3.75545	3.97467	4.40454	4.32802	4.30859	4.79894
2.6	3.91572	4.48139	1.68005	2.90698	3.72871	3.92936	4.374	4.29665	4.27932	4.74052
2.65	3.81379	4.36822	1.80901	2.91319	3.66589	3.82516	4.3023	4.2246	4.2119	4.60598
2.7	3.72162	4.27157	1.93311	2.92073	3.60825	3.73371	4.23698	4.16074	4.152	4.48674
2.75	3.63863	4.18966	2.05185	2.92774	3.555	3.65561	4.17735	4.10412	4.09824	4.3822
2.8	3.56394	4.12019	2.16406	2.93446	3.50409	3.59126	4.12312	4.05394	4.05007	4.29042
2.85	3.49693	4.06123	2.26884	2.94107	3.45396	3.54091	4.07409	4.00954	4.0071	4.20983
2.9	3.43705	4.01111	2.36552	2.9476	3.40499	3.50314	4.02996	3.97033	3.96889	4.13914
2.95	3.38377	3.96844	2.45362	2.95407	3.35881	3.47553	3.99043	3.9358	3.93503	4.07727
3	3.33662	3.93206	2.53285	2.96054	3.31661	3.45618	3.9552	3.9055	3.90515	4.02324
3.05	3.29507	3.90094	2.60305	2.96695	3.27876	3.44388	3.9239	3.87897	3.87885	3.97618
3.1	3.25849	3.87421	2.66417	2.97316	3.24513	3.43779	3.89614	3.85576	3.85573	3.93523

3.15	3.22634	3.85116	2.71645	2.97902	3.2154	3.43721	3.87157	3.83548	3.83541	3.89965
3.2	3.19804	3.83126	2.76041	2.98447	3.18925	3.44146	3.84987	3.8178	3.81761	3.8688
3.25	3.17336	3.81404	2.79687	2.9894	3.16633	3.44976	3.83076	3.80244	3.80204	3.84212
3.3	3.15189	3.79913	2.82679	2.99376	3.14631	3.46124	3.81396	3.78912	3.78844	3.81911
3.35	3.13313	3.78623	2.85121	2.99751	3.12887	3.47498	3.79924	3.7776	3.77658	3.79933
3.4	3.11681	3.77505	2.87115	3.00067	3.11371	3.49014	3.78636	3.76767	3.76622	3.7824
3.45	3.10264	3.76539	2.88752	3.00328	3.10056	3.50597	3.77511	3.75913	3.75712	3.76802
3.5	3.09034	3.75704	2.90106	3.00538	3.08918	3.52186	3.76531	3.75181	3.74894	3.75607
3.55	3.07969	3.74984	2.91239	3.00706	3.07934	3.53737	3.75679	3.74556	3.74114	3.74664
3.6	3.07047	3.74363	2.92199	3.00838	3.07086	3.55218	3.74939	3.74023	3.73342	3.73965
3.7	3.05563	3.73373	2.93733	3.01023	3.05728	3.57903	3.73745	3.73189	3.7201	3.72988
3.8	3.04464	3.72652	2.94905	3.01135	3.04733	3.60176	3.72859	3.72601	3.7104	3.72317
3.9	3.0366	3.72141	2.95837	3.01207	3.04016	3.62056	3.72215	3.72202	3.70376	3.71849

The spin-coupled PECs of CHI along the bond angle										
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
70	0.84019	1.93255	1.93681	1.94732	2.67169	3.42948	3.43939	3.47795	4.16308	4.32475
75	0.56143	1.63589	1.63875	1.64911	2.46182	3.25027	3.25793	3.31266	3.85339	4.02953
80	0.34746	1.36239	1.36407	1.37458	2.27764	3.1361	3.14092	3.21645	3.61568	3.81488
82	0.27864	1.26023	1.26153	1.27217	2.20868	3.10324	3.10697	3.192	3.53775	3.74851
84	0.2191	1.16277	1.16376	1.17455	2.14214	3.07624	3.07901	3.17401	3.46901	3.69246
86	0.16733	1.07078	1.07152	1.08248	2.07917	3.0552	3.05715	3.16226	3.4101	3.64697
88	0.12283	0.98417	0.9847	0.99587	2.01967	3.03979	3.04105	3.15626	3.36056	3.61136
90	0.08556	0.90273	0.90309	0.91451	1.96321	3.02954	3.03026	3.15548	3.3197	3.58477
92	0.05534	0.82635	0.82657	0.83831	1.90957	3.0242	3.02449	3.1595	3.28699	3.56648
94	0.03193	0.75496	0.75506	0.76721	1.85866	3.02357	3.0236	3.168	3.26204	3.55584
96	0.01507	0.68849	0.68849	0.70115	1.81046	3.0274	3.02767	3.18077	3.24449	3.55231
98	0.00452	0.62679	0.62686	0.64008	1.76496	3.03591	3.03636	3.19761	3.23403	3.55536
100	0	0.56986	0.57	0.58394	1.7222	3.04905	3.04962	3.21837	3.23033	3.56451
102	0.00119	0.5176	0.51779	0.53268	1.68218	3.06671	3.06736	3.23304	3.24283	3.57927
104	0.00774	0.4699	0.47014	0.48628	1.64495	3.08874	3.08945	3.24179	3.27079	3.5991
106	0.01927	0.42665	0.42694	0.44473	1.61055	3.11503	3.11578	3.25624	3.30197	3.62346
108	0.03537	0.38775	0.38808	0.40809	1.57905	3.14543	3.14622	3.27605	3.33605	3.65162
110	0.05555	0.35308	0.35346	0.37655	1.55049	3.17986	3.18068	3.30096	3.37246	3.67219
112	0.07914	0.32253	0.32297	0.35051	1.52493	3.2182	3.21906	3.33067	3.40973	3.61016
114	0.105	0.296	0.2965	0.33077	1.50241	3.26031	3.26121	3.36486	3.44149	3.55426
116	0.13121	0.27333	0.27389	0.31889	1.48306	3.30605	3.30699	3.40312	3.43689	3.53899
118	0.15472	0.25453	0.25514	0.31776	1.4671	3.35517	3.35576	3.38931	3.4447	3.57148
120	0.17239	0.23994	0.2406	0.33103	1.4542	3.33044	3.40631	3.40827	3.4872	3.6145
122	0.18288	0.22904	0.22972	0.35911	1.44387	3.27104	3.4582	3.46078	3.52697	3.64833
124	0.18878	0.22182	0.22252	0.39924	1.43653	3.2124	3.50616	3.51092	3.55464	3.63696

126	0.19308	0.21801	0.21871	0.44779	1.43211	3.15531	3.53354	3.54386	3.55796	3.6378
128	0.19786	0.21753	0.21822	0.50238	1.43062	3.10012	3.5279	3.53918	3.54012	3.67689
130	0.20422	0.22027	0.22098	0.56151	1.43204	3.04701	3.50683	3.51176	3.517	3.73255
132	0.21269	0.22613	0.22686	0.62413	1.4363	2.99611	3.48088	3.48194	3.48865	3.79139
134	0.22345	0.23491	0.23568	0.68946	1.44322	2.94747	3.45178	3.45358	3.45914	3.84636
136	0.23644	0.24633	0.24714	0.75707	1.45254	2.90113	3.42123	3.42518	3.4289	3.88659
138	0.25154	0.26019	0.26102	0.82678	1.46409	2.85713	3.39144	3.39697	3.3993	3.89339
140	0.2687	0.27633	0.27716	0.89835	1.47776	2.81557	3.36258	3.36929	3.37058	3.87759
142	0.28782	0.29464	0.29543	0.97145	1.49346	2.77655	3.33457	3.34222	3.34272	3.84961
144	0.30882	0.31497	0.3157	1.04567	1.51106	2.74018	3.3074	3.31572	3.31585	3.81199
146	0.33156	0.33717	0.3378	1.12058	1.5304	2.70659	3.28109	3.28962	3.2903	3.76626
148	0.35584	0.361	0.36151	1.19564	1.55127	2.67591	3.25563	3.26445	3.26567	3.7136
150	0.3815	0.38628	0.38666	1.27008	1.57343	2.64837	3.23107	3.24021	3.24203	3.65723
152	0.40859	0.41304	0.4133	1.34326	1.59702	2.62451	3.20769	3.21722	3.21979	3.5989
154	0.43635	0.44048	0.44063	1.41365	1.62142	2.60416	3.18462	3.19457	3.19816	3.53915
156	0.46463	0.46848	0.46853	1.48072	1.64659	2.58766	3.16216	3.17254	3.17754	3.47936
158	0.49312	0.49666	0.4967	1.54383	1.6723	2.57519	3.14026	3.15101	3.15802	3.42042
160	0.52144	0.52465	0.52476	1.60242	1.69821	2.56685	3.11888	3.12969	3.13967	3.36311
162	0.54918	0.55208	0.55223	1.65605	1.72391	2.56257	3.09791	3.10788	3.12255	3.3081
164	0.57593	0.57848	0.57865	1.70405	1.74897	2.56195	3.07732	3.08499	3.1068	3.25614
166	0.60122	0.60341	0.60357	1.74545	1.77285	2.56465	3.05728	3.06263	3.0927	3.20819
168	0.62446	0.62641	0.62655	1.78005	1.79505	2.56993	3.03809	3.04228	3.08052	3.16516
170	0.6452	0.647	0.64711	1.80817	1.81505	2.57683	3.02012	3.02391	3.07037	3.12773
175	0.68326	0.68491	0.68491	1.85219	1.85298	2.59446	2.9846	2.98871	3.0538	3.06164
179.9	0.69694	0.69851	0.69852	1.86528	1.86675	2.60187	2.9715	2.97601	3.0391	3.04918
	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
70	4.36317	4.6551	5.01934	5.02965	5.04041	5.17941	5.47178	5.6075	5.61799	5.65523
75	4.07249	4.35322	4.79169	4.84631	4.85945	4.91125	5.24742	5.34187	5.34314	5.38066
80	3.85987	4.12067	4.57485	4.67457	4.68944	4.71469	5.01898	5.15224	5.15296	5.18553
82	3.79351	4.04443	4.49992	4.61234	4.62624	4.64896	4.92279	5.09699	5.09794	5.12757
84	3.73704	3.97732	4.4323	4.55479	4.56652	4.58985	4.82372	5.05371	5.05434	5.08097
86	3.6908	3.91992	4.3709	4.49706	4.50743	4.53051	4.73008	5.02233	5.02242	5.04555
88	3.65419	3.87174	4.31515	4.43888	4.44865	4.47053	4.64214	5.00132	5.00183	5.02086
90	3.62634	3.83212	4.26422	4.38162	4.39108	4.41157	4.55878	4.99006	4.99097	5.00637
92	3.60659	3.80057	4.2168	4.32593	4.33518	4.3542	4.48065	4.98769	4.98819	5.00182
94	3.59434	3.77667	4.17091	4.27206	4.28119	4.29827	4.40941	4.99166	4.99325	5.00714
96	3.58907	3.76006	4.12371	4.2201	4.22917	4.24329	4.34703	5.0001	5.00552	5.02146
98	3.59029	3.75036	4.0723	4.17009	4.17919	4.18921	4.29664	5.01227	5.02276	5.04327
100	3.59754	3.74718	4.01473	4.12207	4.13134	4.13717	4.25891	5.02606	5.04203	5.07081
102	3.6103	3.75011	3.95126	4.0761	4.08573	4.08821	4.2321	5.03817	5.05794	5.10071
104	3.62801	3.75865	3.88382	4.03222	4.04245	4.04259	4.21379	5.04419	5.06264	5.11862
106	3.65001	3.7722	3.81456	3.99051	3.99957	4.00228	4.20184	5.04018	5.05291	5.11181

108	3.67539	3.74525	3.78984	3.95113	3.95936	3.96563	4.19462	5.02629	5.03426	5.10188
110	3.68767	3.70242	3.80947	3.915	3.92217	3.93481	4.19087	5.00658	5.01212	5.09132
112	3.71652	3.72716	3.82388	3.88662	3.88953	3.91583	4.1898	4.98421	4.98852	5.07216
114	3.74112	3.74401	3.81537	3.86688	3.88028	3.91997	4.19031	4.95969	4.96321	5.03533
116	3.73596	3.75244	3.78806	3.86817	3.89966	3.94694	4.19137	4.93236	4.93505	4.98693
118	3.71491	3.73609	3.75654	3.89838	3.93644	3.986	4.1918	4.90052	4.9022	4.93376
120	3.68722	3.71115	3.72754	3.94335	3.98277	4.03154	4.19154	4.86255	4.86332	4.87921
122	3.65944	3.69803	3.70697	3.99448	4.03413	4.08175	4.19165	4.81981	4.821	4.82652
124	3.64411	3.70388	3.72844	4.04793	4.0877	4.13591	4.19218	4.77069	4.77767	4.77981
126	3.64337	3.72893	3.774	4.10033	4.14134	4.19382	4.19451	4.72044	4.73591	4.73708
128	3.6787	3.77641	3.81877	4.14343	4.19233	4.20498	4.25548	4.67339	4.69874	4.69915
130	3.73337	3.83553	3.85824	4.16315	4.23435	4.2366	4.32089	4.63242	4.66956	4.6725
132	3.79173	3.88876	3.90091	4.16705	4.26876	4.26895	4.38956	4.60164	4.65708	4.6629
134	3.84721	3.90816	3.97	4.16403	4.28642	4.29143	4.45989	4.58632	4.66896	4.67628
136	3.89385	3.92001	4.04203	4.15374	4.29492	4.30258	4.52972	4.59085	4.70614	4.71286
138	3.92242	3.93504	4.11551	4.13581	4.30762	4.31469	4.59625	4.61592	4.76176	4.7669
140	3.92591	3.9358	4.11255	4.18907	4.33714	4.34207	4.65688	4.65847	4.82783	4.8315
142	3.90497	3.91319	4.08689	4.26079	4.38674	4.38978	4.70775	4.71396	4.88968	4.89126
144	3.86641	3.87313	4.0612	4.3273	4.4519	4.45379	4.74415	4.77799	4.88131	4.88133
146	3.81679	3.82233	4.03697	4.38274	4.52703	4.52829	4.7664	4.84601	4.86025	4.86039
148	3.75995	3.76464	4.01478	4.41848	4.60774	4.60868	4.78674	4.84059	4.84067	4.90764
150	3.70036	3.70445	3.99496	4.42635	4.68779	4.68853	4.81847	4.82621	4.82821	4.92358
152	3.6399	3.64357	3.97776	4.40839	4.74742	4.74773	4.83412	4.83592	4.87162	4.91183
154	3.5791	3.58243	3.9622	4.37256	4.75509	4.75511	4.87992	4.8837	4.90998	4.9104
156	3.51929	3.52233	3.9485	4.32709	4.74334	4.74335	4.87355	4.87429	4.9766	4.98032
158	3.46135	3.46408	3.93657	4.277	4.72867	4.72868	4.85819	4.85842	4.9777	4.9893
160	3.4061	3.40842	3.92632	4.22531	4.71394	4.71395	4.84289	4.843	4.96369	4.9754
162	3.35431	3.35609	3.91767	4.17393	4.69992	4.69992	4.82845	4.82854	4.94979	4.96127
164	3.30684	3.30797	3.91075	4.12434	4.68693	4.68693	4.81516	4.81527	4.9369	4.94792
166	3.2647	3.26532	3.90559	4.07787	4.67523	4.67523	4.80324	4.80335	4.92535	4.93577
168	3.22872	3.22908	3.90222	4.03574	4.66501	4.66501	4.79287	4.79296	4.91534	4.92507
170	3.19929	3.19952	3.90063	3.99885	4.65636	4.65636	4.78412	4.7842	4.90694	4.91595
175	3.153	3.15322	3.90194	3.93379	4.64181	4.64181	4.76955	4.7696	4.89307	4.90049
179.9	3.13949	3.13982	3.90477	3.91274	4.63744	4.63744	4.76526	4.76531	4.889	4.89587
	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
70	5.74191	5.94827	6.14747	6.19085	6.22209	6.38739	6.40724	6.44258	6.51203	6.51521
75	5.5752	5.67293	5.9544	5.99166	6.00708	6.19721	6.22112	6.25406	6.34045	6.34229
80	5.45726	5.47491	5.77898	5.80764	5.83923	6.05596	6.08009	6.10885	6.17576	6.17857
82	5.41484	5.42546	5.70296	5.72646	5.77972	6.01688	6.03934	6.06197	6.11154	6.11589
84	5.3641	5.40269	5.62296	5.64091	5.72388	5.98438	6.00239	6.02102	6.04832	6.05552
86	5.32316	5.37979	5.55299	5.56734	5.67462	5.94676	5.95776	5.98155	5.98517	5.99633
88	5.29058	5.35535	5.49212	5.50435	5.63228	5.90199	5.90201	5.9257	5.93649	5.94637

90	5.26426	5.33089	5.4367	5.44766	5.59651	5.83563	5.848	5.87017	5.8881	5.90773
92	5.24234	5.30667	5.38542	5.39594	5.56742	5.76539	5.78795	5.81247	5.84288	5.86045
94	5.22319	5.2825	5.33801	5.34937	5.54521	5.69455	5.72653	5.75246	5.79677	5.80597
96	5.20549	5.25782	5.2949	5.30975	5.52987	5.6247	5.66601	5.69256	5.74893	5.75373
98	5.18822	5.23007	5.25714	5.27977	5.52042	5.55673	5.60811	5.63454	5.70036	5.703
100	5.17035	5.20019	5.22696	5.25957	5.49121	5.51158	5.55793	5.57976	5.65215	5.65371
102	5.15159	5.17416	5.20892	5.24679	5.42861	5.48179	5.52997	5.53702	5.605	5.60602
104	5.13381	5.16815	5.20677	5.23865	5.3698	5.43764	5.48819	5.53935	5.55932	5.56011
106	5.1194	5.19365	5.21614	5.23044	5.31724	5.40021	5.45964	5.51528	5.51616	5.54694
108	5.10803	5.20222	5.22041	5.22783	5.28227	5.38293	5.4495	5.47302	5.47539	5.55382
110	5.09898	5.17079	5.20443	5.21159	5.29399	5.39491	5.42939	5.43331	5.46752	5.5425
112	5.09218	5.13817	5.17322	5.1779	5.3205	5.38982	5.39102	5.43382	5.49295	5.51226
114	5.08772	5.12233	5.1383	5.14273	5.3366	5.35261	5.35294	5.47331	5.48127	5.48695
116	5.08563	5.10602	5.10991	5.11981	5.31532	5.3154	5.34043	5.44709	5.4548	5.50348
118	5.07781	5.08305	5.08861	5.1239	5.27784	5.2779	5.33635	5.41392	5.42071	5.48165
120	5.05961	5.06321	5.09009	5.13392	5.2411	5.24115	5.32758	5.3809	5.3868	5.45149
122	5.04747	5.0501	5.09291	5.14999	5.20675	5.20682	5.31681	5.34966	5.35502	5.42217
124	5.04059	5.04249	5.0973	5.17065	5.17388	5.17504	5.30476	5.3195	5.32545	5.39332
126	5.03788	5.03926	5.10325	5.14227	5.14237	5.19915	5.28706	5.29041	5.30271	5.36485
128	5.03791	5.03895	5.10936	5.11245	5.11335	5.23153	5.26154	5.26259	5.289	5.33669
130	5.03789	5.03871	5.08573	5.08605	5.11723	5.23413	5.23653	5.26877	5.2785	5.30884
132	5.03006	5.03051	5.06894	5.06986	5.12194	5.2099	5.21311	5.26224	5.28142	5.31504
134	5.00931	5.00947	5.06506	5.06696	5.12215	5.18958	5.1935	5.24717	5.25482	5.36329
136	4.98394	4.98402	5.06268	5.06602	5.11614	5.17639	5.17865	5.22982	5.23034	5.37783
138	4.9583	4.95836	5.05448	5.05991	5.1033	5.16932	5.17315	5.20819	5.21213	5.35508
140	4.9339	4.93392	5.03994	5.04771	5.08523	5.16097	5.17891	5.19345	5.19587	5.33519
142	4.91976	4.92068	5.02357	5.03294	5.06954	5.14464	5.17183	5.19293	5.19779	5.31947
144	4.96799	4.96944	5.02122	5.02753	5.0669	5.1245	5.15304	5.20327	5.20583	5.31147
146	4.97077	4.98051	5.07264	5.07421	5.08745	5.10792	5.13845	5.20256	5.21526	5.31526
148	4.95441	4.97597	5.07603	5.10644	5.12728	5.16088	5.16627	5.19374	5.21821	5.32915
150	4.93626	5.00531	5.05682	5.10774	5.17735	5.18199	5.20354	5.23717	5.24661	5.34195
152	4.92135	5.02772	5.03808	5.14209	5.16474	5.19805	5.23998	5.30649	5.31211	5.34156
154	4.94524	5.02161	5.02246	5.15035	5.17264	5.22527	5.30262	5.33046	5.33052	5.36556
156	4.99415	5.01445	5.0304	5.1399	5.16373	5.301	5.31522	5.31739	5.3677	5.41587
158	5.05087	5.07089	5.09921	5.14576	5.15712	5.30007	5.3003	5.38685	5.43173	5.46251
160	5.07182	5.11154	5.18011	5.18983	5.1941	5.28534	5.28558	5.47216	5.49487	5.50861
162	5.06708	5.1073	5.26101	5.266	5.26749	5.27139	5.27327	5.54674	5.54972	5.56226
164	5.05746	5.0965	5.25821	5.25824	5.33381	5.35017	5.35018	5.59546	5.59564	5.62378
166	5.0474	5.08559	5.24643	5.24646	5.4016	5.42979	5.42986	5.63982	5.64009	5.68443
168	5.03811	5.07571	5.23604	5.23607	5.4633	5.50363	5.50366	5.68232	5.68313	5.74222
170	5.03006	5.06717	5.22715	5.22718	5.51751	5.56961	5.56965	5.7226	5.72418	5.79569
175	5.01636	5.05246	5.21177	5.21178	5.61416	5.68937	5.68947	5.80809	5.81274	5.90032
179.9	5.01231	5.04791	5.20677	5.20677	5.64701	5.72963	5.72963	5.85132	5.861	5.90785

	#31	#32	#33	#34	#35	#36	#37	#38	#39	#40
70	6.60406	6.63883	6.6579	6.78612	6.83382	6.83855	7.11631	7.16789	7.18468	7.57287
75	6.4205	6.4586	6.48962	6.55152	6.61178	6.61873	6.8401	6.90033	6.91839	7.23275
80	6.25131	6.29151	6.33145	6.34697	6.4132	6.42746	6.60399	6.67304	6.69162	6.93873
82	6.18564	6.2261	6.25252	6.29896	6.34753	6.36426	6.49637	6.56958	6.59066	6.83758
84	6.12008	6.16221	6.18017	6.2581	6.29292	6.309	6.36409	6.44299	6.46995	6.7465
86	6.05167	6.09866	6.11153	6.21764	6.23448	6.24915	6.25842	6.32636	6.35821	6.6592
88	5.98346	6.03707	6.04684	6.13682	6.17567	6.19497	6.2101	6.23203	6.26501	6.57514
90	5.91917	5.97987	5.98719	6.04955	6.12786	6.14428	6.15167	6.17259	6.18801	6.49527
92	5.87066	5.92868	5.93239	5.97315	6.06311	6.08742	6.10712	6.13048	6.13281	6.4198
94	5.83443	5.88027	5.88373	5.90679	5.9989	6.0267	6.0726	6.08888	6.098	6.34854
96	5.79878	5.82675	5.84357	5.85164	5.94056	5.96892	6.04294	6.05567	6.06743	6.28124
98	5.76322	5.77238	5.80477	5.80624	5.88826	5.91615	6.01769	6.02821	6.04099	6.21758
100	5.72078	5.72748	5.76138	5.7707	5.84141	5.86837	5.99696	6.0059	6.01879	6.15734
102	5.67338	5.69147	5.71962	5.7364	5.79947	5.82531	5.98034	5.98803	6.00059	6.10037
104	5.6309	5.65559	5.67918	5.70326	5.7619	5.78663	5.9671	5.97389	5.9861	6.04663
106	5.59415	5.62054	5.64013	5.67122	5.72838	5.75205	5.95508	5.96239	5.9749	5.99624
108	5.56437	5.58847	5.60274	5.6403	5.69894	5.72144	5.93719	5.94587	5.95539	5.96687
110	5.54312	5.56829	5.5745	5.61104	5.67403	5.69483	5.9037	5.90653	5.9426	5.96271
112	5.52536	5.548	5.57028	5.59074	5.65488	5.67262	5.86378	5.87127	5.92754	5.95696
114	5.53526	5.54657	5.55763	5.59042	5.64354	5.65615	5.82925	5.83787	5.90755	5.94023
116	5.52763	5.56483	5.58245	5.59379	5.64085	5.64991	5.8034	5.80959	5.88632	5.91427
118	5.53995	5.58124	5.60048	5.60517	5.64246	5.66068	5.79001	5.79155	5.87019	5.88363
120	5.53937	5.579	5.6025	5.62041	5.64067	5.67631	5.78138	5.79229	5.85421	5.86765
122	5.52976	5.56801	5.59146	5.62519	5.63336	5.68017	5.77437	5.78596	5.82978	5.88564
124	5.51593	5.55222	5.57548	5.61168	5.62681	5.67255	5.75785	5.76775	5.80948	5.91363
126	5.49863	5.53205	5.55996	5.58591	5.61788	5.65952	5.73527	5.74641	5.7978	5.93689
128	5.478	5.50957	5.54534	5.54961	5.60893	5.64445	5.71222	5.72739	5.79789	5.95139
130	5.45465	5.48667	5.50724	5.53153	5.6	5.62753	5.69304	5.71425	5.80747	5.95668
132	5.42946	5.46414	5.46524	5.51987	5.58809	5.60816	5.68161	5.70886	5.82369	5.95609
134	5.40327	5.43029	5.44295	5.51215	5.57123	5.5871	5.6798	5.71091	5.84475	5.95408
136	5.40402	5.40771	5.43417	5.50924	5.55059	5.5667	5.68632	5.71902	5.86947	5.95455
138	5.39429	5.40001	5.47423	5.51204	5.52818	5.55265	5.69891	5.73198	5.89692	5.95929
140	5.37604	5.40738	5.48907	5.50538	5.5279	5.56942	5.71591	5.74897	5.9259	5.9682
142	5.35941	5.42724	5.47585	5.48306	5.54104	5.62571	5.73632	5.76948	5.95335	5.98165
144	5.34706	5.45595	5.45792	5.46248	5.55695	5.69111	5.7594	5.79341	5.97288	5.99204
146	5.34215	5.44099	5.44309	5.49313	5.57639	5.75752	5.78459	5.82194	5.98568	6.00271
148	5.34568	5.42994	5.43032	5.53515	5.59864	5.81127	5.81584	5.86177	5.99601	6.01357
150	5.34964	5.43351	5.43554	5.58205	5.62337	5.83896	5.8556	5.92061	6.00512	6.02542
152	5.34474	5.46661	5.46955	5.63356	5.65083	5.86746	5.88713	5.98217	6.01372	6.04295
154	5.37147	5.5258	5.52811	5.68016	5.68831	5.89513	5.91555	6.02034	6.02148	6.08186
156	5.42085	5.6004	5.60164	5.71166	5.74564	5.92065	5.94096	6.02996	6.03721	6.10845

158	5.46696	5.68048	5.68195	5.74635	5.80438	5.94184	5.96139	6.04124	6.05166	6.11118
160	5.51329	5.75067	5.76513	5.79235	5.86306	5.95687	5.97496	6.05727	6.06951	6.11477
162	5.57486	5.79446	5.84537	5.86253	5.9198	5.96629	5.98204	6.07828	6.09144	6.12074
164	5.66654	5.82697	5.91341	5.93444	5.97323	5.97539	5.98824	6.10314	6.11582	6.1315
166	5.75274	5.85897	5.94703	5.9684	5.99278	6.02453	6.02953	6.13038	6.14117	6.15142
168	5.8216	5.89246	5.95239	5.9723	6.01225	6.07637	6.07937	6.16153	6.16897	6.18376
170	5.87333	5.92376	5.95044	5.97636	6.0224	6.10785	6.10816	6.17076	6.20429	6.21495
175	5.92226	5.93445	5.96704	6.02075	6.02441	6.12489	6.12605	6.13197	6.298	6.31384
179.9	5.90801	5.95234	5.99523	5.9995	6.03934	6.11003	6.12532	6.1254	6.32718	6.35013
	#41	#42	#43	#44	#45	#46	#47	#48	#49	#50
70	7.57378	7.67624	7.68385	7.7023	7.7298	8.5557	8.56944	8.57282	8.61307	8.61309
75	7.23424	7.34927	7.36684	7.37173	7.3971	8.29978	8.31086	8.31488	8.3489	8.34895
80	6.94143	7.06081	7.07957	7.08595	7.10947	8.09852	8.10735	8.11183	8.1403	8.14042
82	6.84091	6.96173	6.96867	6.98531	7.00897	8.03404	8.04227	8.04663	8.0734	8.07353
84	6.75015	6.86161	6.87211	6.89298	6.91748	7.97886	7.98676	7.99061	8.01618	8.01629
86	6.6631	6.76365	6.78527	6.80549	6.83016	7.9301	7.93764	7.94106	7.96538	7.96548
88	6.57945	6.67544	6.70096	6.7219	6.74599	7.88667	7.89374	7.89694	7.91986	7.91995
90	6.50016	6.59601	6.62049	6.64265	6.66582	7.84849	7.85507	7.85815	7.87967	7.87976
92	6.42541	6.52476	6.54424	6.56784	6.58992	7.81529	7.8214	7.8244	7.84456	7.84466
94	6.35505	6.46132	6.47219	6.49731	6.51824	7.78665	7.79229	7.79526	7.81412	7.81422
96	6.28884	6.40416	6.40531	6.43087	6.45058	7.76206	7.76727	7.77022	7.78785	7.78795
98	6.22653	6.33998	6.35621	6.36848	6.38673	7.74105	7.74586	7.7488	7.76526	7.76537
100	6.16796	6.27953	6.30765	6.31579	6.32651	7.72317	7.72759	7.73054	7.7459	7.74602
102	6.11319	6.2228	6.25274	6.26984	6.27897	7.70803	7.71209	7.71504	7.72936	7.7295
104	6.06266	6.16995	6.20065	6.21668	6.24785	7.69526	7.69898	7.70194	7.71529	7.71543
106	6.01809	6.12126	6.15194	6.16707	6.22041	7.68447	7.68788	7.69086	7.70329	7.70344
108	5.98543	6.0773	6.10684	6.12127	6.19433	7.67531	7.67843	7.68141	7.69298	7.69314
110	5.96911	6.03899	6.06615	6.08024	6.16662	7.66741	7.67027	7.67323	7.68401	7.68418
112	5.96326	6.00633	6.03228	6.04701	6.13424	7.66046	7.66308	7.66601	7.67604	7.67622
114	5.96547	5.9759	6.01009	6.02695	6.09566	7.65413	7.65654	7.65941	7.66875	7.66894
116	5.946	5.96934	5.99967	6.02038	6.05335	7.648	7.65023	7.65299	7.6617	7.66189
118	5.92123	5.97026	5.98683	6.02232	6.02252	7.64159	7.64367	7.64627	7.65441	7.65459
120	5.91397	5.94559	5.9842	6.0215	6.03286	7.636	7.63798	7.64031	7.64797	7.64813
122	5.92721	5.93698	5.99262	6.03736	6.05454	7.63099	7.63291	7.63491	7.64215	7.64228
124	5.93135	5.98504	6.00277	6.06788	6.09025	7.62663	7.62855	7.63011	7.63699	7.63708
126	5.94356	6.01325	6.04583	6.11448	6.14126	7.62225	7.62423	7.62523	7.63183	7.63188
128	5.95278	6.02358	6.11058	6.17321	6.20382	7.61777	7.61986	7.62021	7.62656	7.62658
130	5.95806	6.03359	6.17291	6.23686	6.27121	7.61313	7.61503	7.61534	7.62105	7.62107
132	5.95906	6.04322	6.2274	6.29796	6.33588	7.60828	7.60969	7.61051	7.61515	7.61519
134	5.9581	6.05255	6.27088	6.35003	6.3908	7.60316	7.60417	7.60517	7.60874	7.60882
136	5.95926	6.06164	6.30433	6.39027	6.43279	7.59771	7.59841	7.59935	7.60192	7.60201
138	5.96415	6.07052	6.33077	6.42014	6.46351	7.59193	7.59234	7.59325	7.59488	7.59498

140	5.97203	6.07907	6.35223	6.44216	6.48586	7.58584	7.58598	7.58703	7.58777	7.58792
142	5.98268	6.08719	6.36926	6.4579	6.50156	7.5793	7.57945	7.58058	7.58085	7.58103
144	6.00757	6.09498	6.38151	6.46786	6.51108	7.57245	7.57257	7.57352	7.57448	7.57458
146	6.04002	6.10319	6.38824	6.47188	6.51418	7.56535	7.56554	7.56648	7.56813	7.56833
148	6.0718	6.11518	6.38884	6.46983	6.51072	7.55813	7.55851	7.55946	7.56181	7.56201
150	6.09208	6.14018	6.38367	6.46247	6.50168	7.55098	7.55157	7.55248	7.55544	7.55564
152	6.10108	6.17823	6.37474	6.45217	6.49012	7.54412	7.54492	7.54566	7.54915	7.54933
154	6.10549	6.22065	6.36371	6.44084	6.47895	7.5371	7.53814	7.53858	7.54251	7.54268
156	6.13695	6.26411	6.35368	6.43164	6.47246	7.53019	7.53148	7.53155	7.53588	7.53603
158	6.18511	6.30532	6.34798	6.42828	6.47573	7.52346	7.52469	7.525	7.52937	7.52948
160	6.2139	6.33826	6.34977	6.43724	6.49576	7.51695	7.51807	7.51872	7.52306	7.52312
162	6.21936	6.35736	6.35758	6.46441	6.53519	7.5107	7.51176	7.51266	7.51698	7.51699
164	6.20986	6.3666	6.36775	6.50474	6.56842	7.50483	7.50583	7.50691	7.51115	7.51123
166	6.19804	6.37574	6.37732	6.54978	6.55455	7.49953	7.50052	7.50166	7.50586	7.50599
168	6.18901	6.38653	6.38947	6.51122	6.59477	7.49503	7.49603	7.49712	7.50132	7.50146
170	6.22213	6.3986	6.40461	6.46777	6.63706	7.49138	7.49241	7.49337	7.49757	7.49771
175	6.31518	6.38658	6.44618	6.44979	6.71919	7.48579	7.487	7.4873	7.49148	7.4916
179.9	6.35019	6.37361	6.46595	6.46618	6.74817	7.4845	7.48571	7.48583	7.48984	7.48996

The spin-coupled PECs of CHI along the CH bond length										
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
1.108	0	0.57088	0.57103	0.58496	1.72377	3.04851	3.04908	3.21783	3.23002	3.56396
1.12	0.00133	0.57891	0.57906	0.59293	1.72592	3.04656	3.04712	3.21452	3.23059	3.56259
1.14	0.01222	0.60098	0.60114	0.6149	1.73798	3.05173	3.05227	3.21735	3.24009	3.56879
1.16	0.03287	0.63282	0.63298	0.64665	1.75954	3.06634	3.06686	3.22955	3.25921	3.5845
1.18	0.06213	0.67327	0.67344	0.68701	1.7894	3.08923	3.08973	3.24996	3.28681	3.6086
1.2	0.09897	0.72128	0.72147	0.73495	1.8265	3.11937	3.11985	3.27754	3.32187	3.64003
1.22	0.14246	0.77592	0.77612	0.78952	1.86988	3.15583	3.15628	3.31135	3.36346	3.67788
1.24	0.19176	0.83634	0.83655	0.84987	1.91865	3.19774	3.19816	3.35054	3.41075	3.72129
1.26	0.24612	0.90176	0.902	0.91523	1.97203	3.24436	3.24474	3.39433	3.463	3.76951
1.28	0.30485	0.9715	0.97175	0.98491	2.02927	3.29497	3.29533	3.44202	3.51953	3.82185
1.3	0.36733	1.0449	1.04518	1.05826	2.08971	3.34895	3.34926	3.49298	3.57973	3.87769
1.32	0.43297	1.12137	1.12169	1.13469	2.15273	3.4057	3.40598	3.54661	3.64303	3.93644
1.34	0.50126	1.20039	1.20074	1.21367	2.21779	3.46471	3.46494	3.60239	3.70893	3.99759
1.36	0.57176	1.28148	1.28188	1.29474	2.28437	3.52548	3.52566	3.65981	3.77699	4.06067
1.38	0.64406	1.36424	1.36469	1.37747	2.35203	3.58758	3.58771	3.71844	3.8468	4.12526
1.4	0.71785	1.44829	1.44881	1.46152	2.42041	3.65064	3.65071	3.77789	3.91807	4.19102
1.42	0.7925	1.53308	1.53367	1.54631	2.48886	3.71402	3.71402	3.83755	3.99015	4.25727
1.44	0.86823	1.61867	1.61934	1.6319	2.55735	3.7774	3.77748	3.89715	4.06297	4.32388
1.46	0.94853	1.70613	1.70665	1.71923	2.62775	3.84099	3.84202	3.95737	4.13669	4.39106
1.48	1.02432	1.79134	1.79195	1.80453	2.69396	3.90299	3.90411	4.01539	4.20916	4.45672
1.5	1.09951	1.87593	1.87663	1.88918	2.75896	3.96414	3.96535	4.07241	4.28146	4.52166
1.52	1.17511	1.96046	1.96127	1.9738	2.82304	4.02464	4.02596	4.12856	4.35408	4.58634

1.54	1.2502	2.04401	2.04492	2.05743	2.88532	4.08372	4.08515	4.18317	4.42603	4.64968
1.56	1.32502	2.12658	2.12762	2.14012	2.9458	4.14131	4.14288	4.23614	4.49737	4.71158
1.58	1.40345	2.20876	2.21004	2.22258	3.00532	4.1999	4.20161	4.28969	4.57124	4.77453
1.6	1.47701	2.28879	2.29022	2.30276	3.06114	4.25322	4.25507	4.3382	4.63967	4.83068
1.62	1.54966	2.36749	2.36906	2.38157	3.11495	4.30462	4.30662	4.38469	4.70652	4.88199
1.64	1.62219	2.44558	2.44725	2.45971	3.16807	4.35584	4.35802	4.43095	4.77211	4.92216
1.66	1.69235	2.52064	2.52238	2.53478	3.21594	4.4019	4.4042	4.47194	4.82929	4.93656
1.68	1.76108	2.59387	2.59568	2.60801	3.26166	4.44535	4.44771	4.51031	4.86863	4.91976
1.7	1.8284	2.66516	2.667	2.67925	3.30509	4.48606	4.48841	4.54602	4.86685	4.88548
1.75	1.99063	2.83377	2.83554	2.84761	3.40264	4.57529	4.57667	4.62316	4.77362	4.78043
1.8	2.14412	2.98669	2.98831	3.00023	3.48439	4.63177	4.64093	4.66431	4.66662	4.69397
1.85	2.28863	3.12269	3.12421	3.13598	3.55103	4.56088	4.56265	4.56594	4.70901	4.72033
1.9	2.42392	3.24142	3.24292	3.25454	3.60386	4.46905	4.47022	4.47281	4.75731	4.76691
1.95	2.54994	3.34292	3.34443	3.35592	3.64459	4.3844	4.38544	4.38785	4.8003	4.8096
2	2.66676	3.42767	3.42921	3.44065	3.67504	4.30774	4.3087	4.31107	4.84102	4.85024
2.05	2.77461	3.49682	3.49836	3.50988	3.69712	4.23888	4.23976	4.24217	4.88155	4.89071
2.1	2.87386	3.55204	3.55354	3.56533	3.7126	4.17745	4.17825	4.18074	4.92285	4.93193
2.15	2.96482	3.59523	3.59666	3.60893	3.72296	4.12294	4.12367	4.12628	4.9649	4.97387
2.2	3.04776	3.62832	3.62962	3.64265	3.72934	4.07473	4.07541	4.07814	5.00706	5.01588
2.25	3.12295	3.6531	3.65424	3.66831	3.73263	4.0322	4.03284	4.0357	5.04842	5.0571
2.3	3.19078	3.67122	3.6722	3.6876	3.7336	3.99482	3.99542	3.99841	5.08818	5.09673
2.35	3.25178	3.68422	3.68505	3.70211	3.73301	3.9622	3.96277	3.96588	5.12566	5.13412
2.4	3.30633	3.69322	3.69391	3.71294	3.73124	3.93385	3.93439	3.9376	5.16038	5.16879
2.45	3.35491	3.69916	3.69973	3.72104	3.72863	3.90934	3.90985	3.91313	5.19258	5.20096
2.5	3.39797	3.70277	3.70324	3.72547	3.72717	3.88829	3.88877	3.89207	5.22168	5.23005
2.55	3.436	3.70464	3.70502	3.72195	3.73189	3.87032	3.87078	3.87405	5.24747	5.25583
2.6	3.46944	3.70522	3.70553	3.71825	3.73563	3.8551	3.85554	3.85871	5.27026	5.27861
2.65	3.49873	3.70484	3.7051	3.71451	3.7387	3.84229	3.84271	3.84571	5.29042	5.29876
2.7	3.52428	3.7038	3.70402	3.71082	3.74134	3.83157	3.83197	3.83475	5.30819	5.31651
2.8	3.56569	3.70054	3.70073	3.70392	3.74593	3.81529	3.81566	3.81782	5.3373	5.34554
2.9	3.59645	3.69669	3.69695	3.69804	3.75019	3.80419	3.80455	3.80602	5.35933	5.36744
3	3.61899	3.69268	3.69339	3.69363	3.75438	3.79668	3.79708	3.79789	5.37596	5.38383
3.1	3.63536	3.68905	3.6904	3.69049	3.7585	3.79155	3.7921	3.79244	5.38854	5.39605
3.2	3.64721	3.68628	3.68808	3.68814	3.76239	3.78797	3.78883	3.78896	5.39811	5.40508
3.3	3.65583	3.6843	3.6864	3.68643	3.76594	3.78552	3.78673	3.78678	5.40542	5.41165
3.4	3.66217	3.68296	3.68524	3.68527	3.76906	3.78393	3.78544	3.78546	5.41103	5.4163
3.5	3.66689	3.6821	3.68451	3.68454	3.77173	3.78295	3.78469	3.78471	5.41535	5.41948
3.6	3.67046	3.68161	3.68411	3.68413	3.77398	3.7824	3.78433	3.78434	5.4187	5.42158
3.7	3.67319	3.68138	3.68394	3.68396	3.77585	3.78215	3.78422	3.78422	5.4213	5.42299
3.8	3.67531	3.68134	3.68394	3.68395	3.77739	3.7821	3.78427	3.78428	5.42331	5.42401
3.9	3.67697	3.68141	3.68405	3.68406	3.77866	3.78218	3.78443	3.78443	5.42458	5.42474
4	3.67829	3.68157	3.68422	3.68423	3.77971	3.78234	3.78465	3.78465	5.42524	5.42532
4.1	3.67935	3.68177	3.68444	3.68445	3.78058	3.78255	3.7849	3.7849	5.42574	5.4258

4.2	3.6802	3.68199	3.68467	3.68468	3.78129	3.78278	3.78516	3.78516	5.42616	5.42621
4.3	3.68089	3.68221	3.68491	3.68491	3.78188	3.78301	3.78541	3.78541	5.42653	5.42657
4.4	3.68145	3.68244	3.68514	3.68514	3.78237	3.78324	3.78566	3.78566	5.42685	5.42688
4.5	3.68191	3.68265	3.68536	3.68536	3.78278	3.78346	3.78589	3.78589	5.42713	5.42715
	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
1.108	3.59696	3.74709	4.01638	4.12026	4.12953	4.13567	4.25965	5.02717	5.04414	5.07232
1.12	3.59557	3.74758	4.02162	4.12406	4.13335	4.1398	4.26142	5.02154	5.03881	5.06432
1.14	3.60173	3.75691	4.03889	4.13891	4.14823	4.15522	4.2731	5.01969	5.03707	5.0588
1.16	3.6174	3.77579	4.0657	4.16327	4.17265	4.18022	4.29458	5.02622	5.04332	5.06193
1.18	3.64143	3.80309	4.10086	4.19595	4.2054	4.2136	4.32474	5.04003	5.05655	5.07258
1.2	3.6728	3.83777	4.1433	4.23587	4.2454	4.25427	4.36255	5.06007	5.0758	5.08967
1.22	3.71057	3.87889	4.19204	4.28202	4.29165	4.30124	4.40709	5.0854	5.10019	5.11224
1.24	3.75389	3.92563	4.24618	4.33348	4.34323	4.35359	4.45754	5.11514	5.12891	5.13939
1.26	3.80201	3.97722	4.30491	4.38939	4.39928	4.41047	4.51315	5.1485	5.16119	5.17033
1.28	3.85424	4.03299	4.36749	4.44894	4.459	4.47107	4.57325	5.18473	5.19635	5.20433
1.3	3.90995	4.0923	4.43321	4.51134	4.5216	4.53462	4.63724	5.22316	5.23371	5.24073
1.32	3.96856	4.15459	4.50139	4.57584	4.58634	4.60039	4.70455	5.26313	5.27269	5.27894
1.34	4.02955	4.21934	4.57144	4.64168	4.65246	4.66763	4.77472	5.30405	5.31274	5.31846
1.36	4.09246	4.2861	4.64272	4.70808	4.71919	4.73564	4.84732	5.34536	5.35339	5.35887
1.38	4.15687	4.35445	4.71463	4.7742	4.78569	4.80368	4.92198	5.38654	5.39418	5.39984
1.4	4.22242	4.42405	4.78647	4.83915	4.85106	4.87106	4.99842	5.42715	5.43478	5.44112
1.42	4.28846	4.49434	4.85707	4.90141	4.91374	4.93673	5.07623	5.46663	5.47465	5.48229
1.44	4.35482	4.56521	4.92515	4.95956	4.97226	5.00028	5.15537	5.50478	5.51363	5.52329
1.46	4.42162	4.63887	5.00187	5.02931	5.04173	5.07314	5.24107	5.5411	5.55161	5.5672
1.48	4.4871	4.7086	5.05995	5.08073	5.09294	5.13698	5.31825	5.57425	5.58609	5.60736
1.5	4.55193	4.77773	5.10777	5.12213	5.13392	5.19905	5.39538	5.60517	5.61877	5.64699
1.52	4.61657	4.84644	5.14386	5.15335	5.16445	5.26077	5.4717	5.63453	5.65021	5.68748
1.54	4.67995	4.91378	5.16593	5.17219	5.18238	5.3209	5.54562	5.66198	5.68003	5.72927
1.56	4.74198	4.97931	5.17328	5.17756	5.18698	5.37875	5.61607	5.68794	5.70865	5.77373
1.58	4.80511	5.04312	5.15711	5.15999	5.17081	5.43661	5.67604	5.71391	5.73732	5.82415
1.6	4.86137	5.0912	5.14001	5.14226	5.16497	5.48651	5.7358	5.73853	5.76354	5.87711
1.62	4.91205	5.09198	5.11438	5.11793	5.19348	5.5311	5.75897	5.78954	5.79803	5.93463
1.64	4.94752	5.05209	5.08349	5.09307	5.2484	5.57123	5.78143	5.81625	5.86213	5.99916
1.66	4.95252	5.02008	5.08281	5.10323	5.30367	5.60569	5.80313	5.843	5.91786	6.06198
1.68	4.92936	5.00098	5.10883	5.13762	5.35772	5.63632	5.82532	5.87141	5.97464	6.12579
1.7	4.89305	5.01995	5.14912	5.18215	5.40997	5.66418	5.84829	5.90152	6.03238	6.18981
1.75	4.78632	5.15131	5.26276	5.3018	5.53209	5.72767	5.91085	5.98518	6.17849	6.2726
1.8	4.70094	5.29376	5.37638	5.42125	5.64356	5.79005	5.98266	6.08084	6.32171	6.33927
1.85	4.7423	5.42857	5.48536	5.5375	5.74708	5.85545	6.06188	6.18281	6.39526	6.39752
1.9	4.78478	5.55282	5.58946	5.65122	5.84488	5.92374	6.14237	6.25637	6.28356	6.29049
1.95	4.82376	5.66594	5.68849	5.76231	5.93751	5.99131	6.17241	6.17387	6.18545	6.18552
2	4.86165	5.76817	5.78152	5.86927	6.01881	6.03456	6.08585	6.09222	6.10028	6.11469

2.05	4.90014	5.85768	5.86488	5.96576	5.98767	5.99833	6.01089	6.02597	6.02814	6.1287
2.1	4.93993	5.90239	5.90729	5.921	5.92926	5.93433	5.99164	5.99907	6.07255	6.20632
2.15	4.98084	5.85607	5.8585	5.86925	5.86981	5.87333	6.0501	6.05421	6.16098	6.28363
2.2	5.02211	5.80179	5.80369	5.81277	5.81849	5.82039	6.12113	6.1234	6.24372	6.34793
2.25	5.06278	5.75289	5.75531	5.76246	5.77171	5.77272	6.18816	6.18941	6.31927	6.40472
2.3	5.10197	5.70956	5.71271	5.71822	5.72997	5.73051	6.24928	6.24993	6.38732	6.45681
2.35	5.13897	5.67147	5.67528	5.67954	5.69304	5.69333	6.30494	6.30522	6.44909	6.50413
2.4	5.17327	5.63806	5.6424	5.64576	5.66044	5.6606	6.35484	6.35491	6.50444	6.54657
2.45	5.20509	5.60884	5.61357	5.61629	5.63176	5.63185	6.39929	6.39932	6.55366	6.58449
2.5	5.23384	5.58335	5.58839	5.59063	5.60664	5.60669	6.43876	6.43882	6.59708	6.61832
2.55	5.25929	5.56116	5.56646	5.56832	5.5847	5.58473	6.47361	6.47367	6.63514	6.64822
2.6	5.28175	5.5419	5.5474	5.54897	5.5656	5.56562	6.50422	6.50426	6.66829	6.67453
2.65	5.30159	5.52519	5.53089	5.53222	5.54901	5.54901	6.53099	6.53099	6.697	6.69764
2.7	5.31904	5.51075	5.51661	5.51774	5.53463	5.53464	6.55451	6.55453	6.71785	6.72216
2.8	5.34754	5.48753	5.49373	5.49453	5.51148	5.51149	6.59168	6.59174	6.75085	6.75686
2.9	5.36896	5.47037	5.47693	5.47747	5.49434	5.49435	6.61936	6.61944	6.74107	6.74107
3	5.38495	5.4578	5.46478	5.46511	5.48176	5.48177	6.63966	6.63973	6.72928	6.72928
3.1	5.39683	5.44868	5.45619	5.45634	5.47263	5.47264	6.65449	6.65456	6.72058	6.72058
3.2	5.40559	5.44214	5.45031	5.45032	5.46608	5.46609	6.66538	6.66544	6.71424	6.71424
3.3	5.41194	5.43751	5.44643	5.44652	5.46144	5.46145	6.67346	6.6735	6.70968	6.70968
3.4	5.41643	5.43429	5.44417	5.44434	5.45822	5.45822	6.67951	6.67954	6.70645	6.70645
3.5	5.41951	5.4321	5.44312	5.44333	5.45602	5.45602	6.68413	6.68415	6.70422	6.70422
3.6	5.4216	5.43065	5.44289	5.44312	5.45457	5.45458	6.68768	6.6877	6.70272	6.70272
3.7	5.42302	5.42974	5.44317	5.44338	5.45366	5.45366	6.69046	6.69048	6.70175	6.70175
3.8	5.42402	5.4292	5.44369	5.44387	5.45312	5.45312	6.69266	6.69267	6.70117	6.70117
3.9	5.4251	5.42893	5.4443	5.44445	5.45285	5.45285	6.69442	6.69443	6.70085	6.70085
4	5.42633	5.42883	5.4449	5.44503	5.45275	5.45275	6.69583	6.69584	6.70073	6.70073
4.1	5.42734	5.42884	5.44546	5.44557	5.45276	5.45276	6.69698	6.69698	6.70072	6.70072
4.2	5.42816	5.42893	5.44596	5.44605	5.45285	5.45285	6.69791	6.69791	6.7008	6.7008
4.3	5.42883	5.42906	5.4464	5.44648	5.45298	5.45298	6.69868	6.69868	6.70093	6.70093
4.4	5.42921	5.42937	5.44678	5.44685	5.45313	5.45313	6.69931	6.69931	6.70108	6.70108
4.5	5.42937	5.42982	5.44711	5.44717	5.45329	5.45329	6.69983	6.69984	6.70125	6.70125
	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
1.108	5.17363	5.20153	5.22966	5.25875	5.49091	5.51329	5.55772	5.57834	5.65004	5.65161
1.12	5.17802	5.20522	5.23468	5.25832	5.49835	5.51315	5.56197	5.58379	5.65696	5.6586
1.14	5.193	5.21804	5.25249	5.26828	5.51917	5.5201	5.57832	5.60137	5.67682	5.67862
1.16	5.21628	5.23733	5.28082	5.2911	5.53535	5.54942	5.60482	5.62846	5.70597	5.70797
1.18	5.2465	5.26209	5.31826	5.32529	5.55814	5.58789	5.64001	5.66386	5.74321	5.74545
1.2	5.28237	5.29207	5.36357	5.36887	5.58777	5.6335	5.68265	5.70648	5.78742	5.78998
1.22	5.32271	5.32704	5.41567	5.42009	5.62361	5.68526	5.73165	5.75531	5.83761	5.84057
1.24	5.36641	5.36655	5.4736	5.47759	5.66512	5.74227	5.78605	5.80946	5.89281	5.89627
1.26	5.41003	5.41244	5.5365	5.54034	5.7118	5.8037	5.84498	5.86808	5.95216	5.95626

1.28	5.45688	5.45986	5.60361	5.60744	5.76318	5.86876	5.90765	5.9304	6.01482	6.01971
1.3	5.50648	5.50787	5.6742	5.67813	5.81876	5.93675	5.97331	5.99566	6.08003	6.08589
1.32	5.5558	5.55822	5.74764	5.75176	5.87802	6.00696	6.04125	6.06319	6.14704	6.15407
1.34	5.60313	5.61152	5.82333	5.82771	5.94038	6.07876	6.11081	6.1323	6.21519	6.22358
1.36	5.64949	5.66585	5.90071	5.90543	6.0052	6.15151	6.18135	6.20233	6.28387	6.29379
1.38	5.69465	5.7207	5.97923	5.98436	6.07172	6.22458	6.2522	6.27261	6.35255	6.36411
1.4	5.73849	5.77565	6.05823	6.06388	6.13903	6.29736	6.32273	6.34248	6.42078	6.43401
1.42	5.78083	5.83008	6.13647	6.14277	6.20548	6.36892	6.39192	6.4109	6.48794	6.50274
1.44	5.82192	5.88396	6.21089	6.21805	6.2671	6.4387	6.4591	6.47711	6.55412	6.57016
1.46	5.86973	5.96356	6.20383	6.21256	6.21346	6.45229	6.4529	6.52353	6.53143	6.55051
1.48	5.90389	6.01927	6.17597	6.17806	6.18593	6.48671	6.48725	6.5633	6.59215	6.6129
1.5	5.93661	6.06871	6.13919	6.14056	6.15476	6.54486	6.54507	6.61596	6.65653	6.6737
1.52	5.96825	6.09348	6.10845	6.11003	6.15331	6.60995	6.61083	6.67567	6.71697	6.7312
1.54	5.99805	6.08557	6.08899	6.09053	6.19444	6.67624	6.67769	6.73674	6.77245	6.78407
1.56	6.02612	6.08228	6.08372	6.0852	6.24408	6.74097	6.74291	6.79617	6.82203	6.8314
1.58	6.0543	6.09235	6.09431	6.0958	6.30053	6.79351	6.79581	6.84084	6.85794	6.86537
1.6	6.08055	6.11679	6.11868	6.1203	6.35508	6.85021	6.85192	6.88447	6.89495	6.90606
1.62	6.10746	6.15104	6.15274	6.154	6.40725	6.89953	6.90055	6.9141	6.9206	6.93621
1.64	6.13543	6.18816	6.18878	6.19065	6.45512	6.9037	6.91186	6.91976	6.96331	6.98868
1.66	6.16086	6.2404	6.24107	6.24345	6.50537	6.88863	6.89999	6.90196	6.95615	6.9624
1.68	6.18539	6.29596	6.29726	6.29981	6.55214	6.85388	6.86204	6.8676	6.90497	6.90671
1.7	6.20983	6.35312	6.35531	6.35779	6.59581	6.80638	6.81061	6.82125	6.84452	6.8453
1.75	6.34631	6.49499	6.49923	6.50125	6.66746	6.66777	6.67959	6.68852	6.69329	6.70107
1.8	6.48676	6.52598	6.53245	6.53779	6.54679	6.54692	6.62959	6.639	6.64142	6.78342
1.85	6.40684	6.41259	6.41963	6.42239	6.46155	6.62697	6.74268	6.75473	6.75729	6.86058
1.9	6.29093	6.31093	6.33287	6.48493	6.58396	6.74053	6.83852	6.85677	6.85955	6.93077
1.95	6.19779	6.26627	6.41	6.56137	6.69631	6.83639	6.9159	6.94345	6.9465	6.99603
2	6.12194	6.33686	6.51031	6.63834	6.79544	6.91512	6.97733	7.01521	7.0186	7.05551
2.05	6.1587	6.41879	6.60673	6.71424	6.87997	6.97864	7.02679	7.07295	7.07681	7.10615
2.1	6.22274	6.4983	6.69674	6.78771	6.94869	7.02935	7.06663	7.1073	7.10842	7.11774
2.15	6.28691	6.5732	6.77914	6.85756	7.00125	7.06075	7.06091	7.06833	7.09761	7.14393
2.2	6.35706	6.64272	6.85292	6.92285	7.01805	7.01806	7.03909	7.09154	7.12103	7.13477
2.25	6.42556	6.70612	6.91653	6.97962	6.97962	6.98262	7.06441	7.09521	7.11863	7.13002
2.3	6.48867	6.76305	6.94517	6.94518	6.96778	7.03537	7.07296	7.09499	7.10466	7.12372
2.35	6.54654	6.81394	6.91443	6.91443	7.00284	7.06204	7.07229	7.1031	7.10379	7.11647
2.4	6.59895	6.85832	6.88701	6.88701	7.01695	7.04649	7.07463	7.10351	7.11264	7.12671
2.45	6.64603	6.86265	6.86265	6.89615	7.01368	7.03073	7.06842	7.09478	7.09733	7.12991
2.5	6.68802	6.84108	6.84108	6.92698	7.00308	7.01655	7.05849	7.07963	7.08641	7.13744
2.55	6.72513	6.82206	6.82206	6.94922	6.99076	7.0056	7.04675	7.06363	7.08016	7.14486
2.6	6.75772	6.80532	6.80532	6.95989	6.97878	7.00044	7.03489	7.04943	7.07744	7.15192
2.65	6.78614	6.79065	6.79065	6.95916	6.96787	7.00063	7.02375	7.03696	7.0793	7.15866
2.7	6.77781	6.77781	6.811	6.95348	6.95828	7.00079	7.01367	7.0261	7.08552	7.16003
2.8	6.75687	6.76066	6.85031	6.94083	6.94304	6.99544	6.99692	7.00863	7.10277	7.15339

2.9	6.77584	6.78859	6.87936	6.93116	6.93248	6.98441	6.98753	6.99584	7.11954	7.14767
3	6.7947	6.80823	6.90068	6.92465	6.92557	6.9754	6.98026	6.98661	7.13305	7.14336
3.1	6.80895	6.82224	6.91576	6.92057	6.92155	6.96912	6.97446	6.97997	7.14056	7.14342
3.2	6.81975	6.83202	6.91822	6.91838	6.92787	6.96489	6.97017	6.9752	7.13878	7.14953
3.3	6.82799	6.83897	6.917	6.91717	6.93631	6.96213	6.96715	6.97183	7.13777	7.14752
3.4	6.83431	6.84401	6.91651	6.91665	6.94271	6.96043	6.9651	6.96949	7.13731	7.1456
3.5	6.8392	6.84774	6.91648	6.91658	6.94759	6.95944	6.96379	6.96792	7.13722	7.14431
3.6	6.84302	6.85057	6.91672	6.91678	6.95133	6.95894	6.96301	6.96692	7.13735	7.14352
3.7	6.84603	6.85276	6.9171	6.91715	6.95425	6.95876	6.96259	6.96632	7.13764	7.14308
3.8	6.84842	6.85449	6.91756	6.9176	6.95652	6.95881	6.96243	6.96601	7.138	7.14289
3.9	6.85032	6.85589	6.91804	6.91807	6.95824	6.95906	6.96244	6.96591	7.1384	7.14287
4	6.85184	6.85702	6.91852	6.91854	6.95903	6.95996	6.96256	6.96593	7.13881	7.14296
4.1	6.85308	6.85795	6.91898	6.91899	6.95936	6.96107	6.96274	6.96604	7.13921	7.14312
4.2	6.85408	6.85872	6.9194	6.9194	6.95965	6.96201	6.96296	6.9662	7.13958	7.14331
4.3	6.85489	6.85937	6.91979	6.91979	6.95994	6.96278	6.96319	6.96639	7.13993	7.14353
4.4	6.85556	6.85991	6.92014	6.92014	6.96021	6.96342	6.96343	6.96659	7.14026	7.14375
4.5	6.85612	6.86036	6.92045	6.92046	6.96047	6.96365	6.96394	6.9668	7.14055	7.14397
	#31	#32	#33	#34	#35	#36	#37	#38	#39	#40
1.108	5.72199	5.72526	5.75956	5.76866	5.8432	5.87056	5.99378	6.00287	6.01569	6.15562
1.12	5.73022	5.73024	5.76551	5.77344	5.85144	5.879	5.99463	6.0039	6.01732	6.16361
1.14	5.74668	5.75256	5.78383	5.78964	5.87388	5.90167	6.00461	6.01423	6.02867	6.18539
1.16	5.77229	5.78439	5.81168	5.81504	5.90612	5.93399	6.02424	6.03428	6.04973	6.21665
1.18	5.80588	5.82437	5.8481	5.84847	5.94699	5.97475	6.0524	6.06296	6.07936	6.2562
1.2	5.8464	5.87108	5.88891	5.89244	5.99544	6.02286	6.08804	6.09928	6.11653	6.30297
1.22	5.89288	5.92306	5.93542	5.94427	6.05053	6.07729	6.13023	6.1424	6.16028	6.35597
1.24	5.94445	5.97915	5.98716	6.00311	6.11139	6.13701	6.17808	6.19161	6.20974	6.41432
1.26	6.0003	6.03869	6.0434	6.06811	6.17725	6.20094	6.23086	6.24646	6.26411	6.4772
1.28	6.05972	6.10132	6.10349	6.1383	6.2473	6.26777	6.28792	6.30685	6.32266	6.54385
1.3	6.12202	6.16669	6.16684	6.21283	6.32064	6.33603	6.34889	6.37293	6.38471	6.61353
1.32	6.18657	6.23293	6.23439	6.29106	6.39554	6.40458	6.4143	6.44464	6.44962	6.68559
1.34	6.25277	6.30124	6.30397	6.37247	6.46801	6.47317	6.48702	6.51676	6.52111	6.75935
1.36	6.32006	6.37128	6.37497	6.45666	6.53704	6.54192	6.56697	6.58559	6.60114	6.83421
1.38	6.3879	6.44253	6.4469	6.54333	6.60525	6.61081	6.65001	6.65607	6.68373	6.90959
1.4	6.45585	6.51449	6.51931	6.63217	6.6733	6.67961	6.72494	6.73723	6.76808	6.98498
1.42	6.52327	6.58632	6.59139	6.72247	6.74082	6.74779	6.79529	6.82353	6.85298	7.05977
1.44	6.59028	6.65758	6.66275	6.80825	6.81334	6.81565	6.86559	6.90873	6.93627	7.13515
1.46	6.56559	6.71484	6.71553	6.85141	6.86809	6.89681	6.91184	7.01437	7.03964	7.24035
1.48	6.62873	6.78842	6.78915	6.9218	6.93869	6.97673	6.98217	7.0905	7.1174	7.31187
1.5	6.68911	6.85759	6.85839	6.98655	7.00415	7.04685	7.05775	7.1682	7.1957	7.38256
1.52	6.74599	6.92228	6.9232	7.04483	7.06362	7.10464	7.13792	7.24514	7.27299	7.45185
1.54	6.79811	6.98039	6.98155	7.09376	7.11442	7.15234	7.21492	7.31911	7.34742	7.50149
1.56	6.84441	7.02898	7.03062	7.12905	7.15267	7.18534	7.28722	7.38865	7.41792	7.53136

1.58	6.8748	7.05908	7.06196	7.13698	7.16619	7.18966	7.33175	7.43464	7.46963	7.52872
1.6	6.90779	7.07461	7.08048	7.12986	7.16682	7.18178	7.38603	7.48614	7.51717	7.52433
1.62	6.95215	7.06471	7.07816	7.09997	7.14878	7.15837	7.4407	7.51291	7.51492	7.54452
1.64	6.99554	7.03867	7.05884	7.0593	7.11905	7.13357	7.50821	7.51742	7.51786	7.60167
1.66	7.03248	7.04934	7.05286	7.06762	7.10409	7.13968	7.53164	7.53235	7.54536	7.63167
1.68	7.05434	7.07173	7.07631	7.08764	7.10644	7.17449	7.54491	7.54551	7.5817	7.65782
1.7	7.06301	7.08415	7.08864	7.12762	7.13551	7.21241	7.55179	7.55239	7.61615	7.67729
1.75	7.08917	7.10541	7.11217	7.22124	7.22902	7.2915	7.5345	7.53496	7.66067	7.68313
1.8	7.11548	7.12862	7.13644	7.29303	7.30368	7.34639	7.48306	7.48342	7.63122	7.64047
1.85	7.13868	7.14932	7.15807	7.33984	7.35304	7.37827	7.41839	7.41901	7.57197	7.57762
1.9	7.1581	7.16626	7.17609	7.3475	7.34811	7.36646	7.38188	7.39521	7.507	7.51151
1.95	7.17226	7.17781	7.18915	7.28257	7.28264	7.37418	7.39022	7.39853	7.44523	7.45018
2	7.18015	7.18291	7.19702	7.22013	7.22016	7.36705	7.3792	7.39264	7.39828	7.40501
2.05	7.16213	7.16246	7.18135	7.18138	7.20099	7.33296	7.33622	7.38009	7.38292	7.39326
2.1	7.12471	7.14502	7.17322	7.17798	7.20379	7.29549	7.29839	7.36628	7.37194	7.38573
2.15	7.15312	7.15872	7.16685	7.18368	7.20954	7.26502	7.27393	7.34927	7.36398	7.37799
2.2	7.14357	7.18278	7.18561	7.19068	7.21321	7.24064	7.2707	7.33728	7.35471	7.36945
2.25	7.14961	7.18416	7.19735	7.20492	7.21561	7.22206	7.28213	7.33183	7.34109	7.36101
2.3	7.16427	7.17364	7.19026	7.21885	7.22293	7.22293	7.28996	7.32578	7.3309	7.35495
2.35	7.14346	7.17485	7.19397	7.22776	7.22844	7.23155	7.28949	7.3136	7.33143	7.35019
2.4	7.13305	7.16624	7.21199	7.23065	7.23362	7.23828	7.28424	7.30536	7.33128	7.34602
2.45	7.15908	7.17221	7.2267	7.22968	7.23711	7.2435	7.27818	7.30064	7.33002	7.34225
2.5	7.16457	7.19591	7.22446	7.23878	7.23961	7.24781	7.27339	7.29865	7.32799	7.3336
2.55	7.16614	7.21482	7.2176	7.23958	7.24892	7.25129	7.27084	7.29847	7.31982	7.32556
2.6	7.16542	7.20963	7.22461	7.24163	7.254	7.25438	7.27141	7.2989	7.30931	7.32296
2.65	7.16313	7.20149	7.22561	7.24533	7.25582	7.25617	7.27512	7.29694	7.30501	7.32035
2.7	7.16509	7.19373	7.22268	7.24761	7.25524	7.25756	7.27982	7.29307	7.3058	7.31757
2.8	7.17601	7.18128	7.21386	7.24831	7.25266	7.25691	7.28858	7.2904	7.30939	7.31396
2.9	7.16894	7.18852	7.20514	7.24718	7.25001	7.25422	7.29137	7.2946	7.31188	7.31202
3	7.16102	7.19792	7.19803	7.24578	7.24778	7.25165	7.29316	7.29815	7.31168	7.31406
3.1	7.15525	7.19269	7.20602	7.24458	7.24605	7.24964	7.29509	7.29995	7.31279	7.31522
3.2	7.15302	7.18886	7.21286	7.24366	7.24479	7.24819	7.29688	7.30089	7.31438	7.31629
3.3	7.15837	7.18621	7.21855	7.24304	7.24393	7.2472	7.29846	7.30156	7.31595	7.31725
3.4	7.16323	7.18444	7.22326	7.24268	7.2434	7.24659	7.29986	7.30217	7.31736	7.31816
3.5	7.16712	7.18331	7.22715	7.24253	7.24313	7.24627	7.30111	7.30279	7.31858	7.31904
3.6	7.17023	7.18264	7.23036	7.24253	7.24304	7.24615	7.30223	7.30341	7.31965	7.31988
3.7	7.17274	7.18229	7.233	7.24265	7.24309	7.24617	7.30322	7.30404	7.32057	7.32066
3.8	7.17478	7.18217	7.23518	7.24284	7.24322	7.2463	7.30411	7.30464	7.32138	7.32138
3.9	7.17643	7.18219	7.23697	7.24307	7.24342	7.24649	7.30489	7.30522	7.32203	7.3221
4	7.17778	7.18232	7.23844	7.24333	7.24365	7.24671	7.30559	7.30575	7.3226	7.32272
4.1	7.17888	7.1825	7.23966	7.24359	7.2439	7.24695	7.3062	7.30625	7.32312	7.32327
4.2	7.17979	7.18271	7.24066	7.24385	7.24414	7.2472	7.3067	7.30673	7.32358	7.32375
4.3	7.18055	7.18294	7.24149	7.2441	7.24438	7.24744	7.3071	7.3072	7.32398	7.32417

4.4	7.18117	7.18316	7.24217	7.24434	7.24461	7.24767	7.30746	7.30761	7.32433	7.32453
4.5	7.18169	7.18338	7.24274	7.24456	7.24482	7.24788	7.30778	7.30797	7.32465	7.32485
	#41	#42	#43	#44	#45	#46	#47	#48	#49	#50
1.108	6.1663	6.27773	6.30595	6.31677	6.32454	7.72365	7.72806	7.731	7.74633	7.74646
1.12	6.1743	6.28557	6.31235	6.31792	6.33265	7.72695	7.73136	7.73436	7.74973	7.74986
1.14	6.19611	6.30714	6.32269	6.33749	6.35463	7.74051	7.74491	7.74804	7.76346	7.7636
1.16	6.22741	6.33821	6.34077	6.36881	6.3861	7.76301	7.76739	7.77065	7.78612	7.78627
1.18	6.267	6.36754	6.37761	6.40862	6.42589	7.79318	7.79754	7.80096	7.81646	7.81662
1.2	6.31382	6.40208	6.42427	6.45573	6.47294	7.8299	7.83422	7.83782	7.85334	7.85351
1.22	6.36689	6.44352	6.47721	6.50915	6.52626	7.87208	7.87636	7.88015	7.89568	7.89587
1.24	6.4253	6.491	6.53553	6.56799	6.58498	7.91872	7.92296	7.92696	7.94249	7.9427
1.26	6.48824	6.54376	6.59844	6.63143	6.64829	7.96887	7.97306	7.97729	7.99281	7.99304
1.28	6.55493	6.60113	6.66516	6.69875	6.71544	8.0216	8.02572	8.03023	8.04571	8.04597
1.3	6.62464	6.66244	6.735	6.76922	6.78574	8.07595	8.07998	8.08481	8.10023	8.10053
1.32	6.69665	6.72711	6.80726	6.84221	6.85852	8.13091	8.13485	8.14003	8.15538	8.15573
1.34	6.7703	6.79462	6.88132	6.9171	6.93318	8.18534	8.18918	8.19477	8.21002	8.21042
1.36	6.84492	6.86449	6.95656	6.99331	7.00912	8.23782	8.24152	8.24759	8.26272	8.26318
1.38	6.91994	6.93623	7.0324	7.07029	7.08579	8.28627	8.28984	8.29645	8.31143	8.31197
1.4	6.99494	7.00927	7.10828	7.14755	7.16269	8.32728	8.3307	8.33792	8.35271	8.35334
1.42	7.0695	7.08264	7.18334	7.22435	7.23902	8.35367	8.3569	8.36476	8.37925	8.37999
1.44	7.14394	7.15609	7.25749	7.30088	7.3148	8.34753	8.35054	8.35874	8.37258	8.37339
1.46	7.24752	7.26698	7.34931	7.39701	7.40608	8.19675	8.1985	8.20357	8.21173	8.21223
1.48	7.32291	7.34231	7.42328	7.47247	7.4813	8.10389	8.10579	8.11125	8.11997	8.12049
1.5	7.39078	7.40974	7.4927	7.54186	7.55133	8.01053	8.01316	8.01963	8.03079	8.03132
1.52	7.4525	7.46955	7.55783	7.60406	7.61573	7.92291	7.92748	7.93586	7.95257	7.95302
1.54	7.51346	7.52344	7.61477	7.65167	7.66995	7.84497	7.85504	7.86689	7.89549	7.89571
1.56	7.53965	7.58854	7.65311	7.67151	7.70998	7.78203	7.80963	7.82527	7.87564	7.87567
1.58	7.53304	7.64905	7.65302	7.65822	7.73294	7.744	7.80936	7.81874	7.89497	7.89522
1.6	7.5292	7.64785	7.65076	7.70706	7.72024	7.78497	7.84614	7.84732	7.93763	7.93822
1.62	7.5822	7.65347	7.65731	7.72474	7.7634	7.82586	7.88248	7.89019	7.98266	7.98353
1.64	7.6412	7.67092	7.67472	7.74309	7.79837	7.8594	7.91579	7.92564	8.02124	8.02219
1.66	7.67166	7.70148	7.70372	7.77166	7.79574	7.895	7.94972	7.9615	8.05848	8.05959
1.68	7.69688	7.73214	7.73361	7.77934	7.79963	7.92404	7.97707	7.98979	8.08786	8.08902
1.7	7.71647	7.75868	7.75907	7.76903	7.82228	7.94739	7.99707	8.01109	8.10926	8.11038
1.75	7.73836	7.7431	7.79539	7.80922	7.85538	7.98819	8.01718	8.04724	8.13246	8.13304
1.8	7.71635	7.72409	7.78819	7.8016	7.86008	7.9966	8.00789	8.08188	8.12909	8.12989
1.85	7.66852	7.69656	7.73534	7.77906	7.82277	7.9738	7.9782	8.0952	8.11214	8.11406
1.9	7.60577	7.67146	7.68117	7.73918	7.76553	7.93474	7.93617	8.0723	8.07515	8.0762
1.95	7.5471	7.61262	7.66163	7.69568	7.70473	7.89186	7.89215	8.02009	8.02145	8.02598
2	7.49693	7.55568	7.6388	7.65149	7.65406	7.84966	7.85052	7.9565	7.96115	7.97114
2.05	7.45861	7.50391	7.58908	7.61604	7.62995	7.80757	7.8109	7.89462	7.90251	7.91754
2.1	7.43427	7.45839	7.54069	7.58146	7.61304	7.76121	7.76725	7.84428	7.85243	7.87091

2.15	7.42042	7.42157	7.49836	7.54889	7.5969	7.70621	7.7125	7.8133	7.81356	7.8362
2.2	7.39273	7.41702	7.46263	7.51608	7.58145	7.6436	7.64988	7.78388	7.79796	7.81575
2.25	7.37807	7.41957	7.43326	7.48206	7.56422	7.57877	7.58928	7.76312	7.79088	7.80541
2.3	7.37106	7.40897	7.42753	7.45039	7.52027	7.52272	7.56112	7.74912	7.78557	7.79871
2.35	7.36656	7.3883	7.41787	7.44051	7.47803	7.4789	7.5499	7.73804	7.77852	7.79166
2.4	7.3615	7.37127	7.3968	7.4232	7.4461	7.4765	7.54206	7.72749	7.76922	7.78324
2.45	7.34908	7.36237	7.3802	7.39871	7.42803	7.49096	7.53707	7.71645	7.75819	7.77358
2.5	7.33896	7.35617	7.36682	7.37884	7.4228	7.5056	7.53521	7.70618	7.74732	7.76427
2.55	7.33601	7.34971	7.35619	7.36383	7.4275	7.51823	7.53626	7.69727	7.73749	7.75606
2.6	7.33349	7.34405	7.34807	7.35297	7.4381	7.52857	7.53972	7.68941	7.7287	7.74884
2.65	7.33136	7.33958	7.34195	7.34523	7.45136	7.53676	7.54515	7.68245	7.72098	7.74254
2.7	7.32894	7.33585	7.33727	7.3396	7.46528	7.54309	7.55205	7.67647	7.71451	7.73719
2.8	7.32716	7.33127	7.33169	7.3329	7.4911	7.55176	7.56751	7.66722	7.70529	7.72919
2.9	7.3257	7.32791	7.32918	7.32943	7.51172	7.55674	7.58295	7.66106	7.7005	7.72404
3	7.325	7.32616	7.32774	7.32786	7.52657	7.55966	7.59705	7.65715	7.69892	7.72088
3.1	7.32481	7.32543	7.32702	7.32718	7.53804	7.56149	7.60808	7.65477	7.69969	7.71904
3.2	7.32499	7.32533	7.32686	7.32699	7.54587	7.56274	7.61739	7.65344	7.70152	7.71807
3.3	7.32542	7.32564	7.32704	7.32712	7.55144	7.56372	7.6249	7.65279	7.70382	7.71768
3.4	7.32599	7.32616	7.32745	7.32747	7.55552	7.56456	7.63087	7.65259	7.7062	7.71766
3.5	7.32663	7.3268	7.32798	7.32799	7.55859	7.56532	7.63558	7.65269	7.70844	7.71787
3.6	7.32729	7.32747	7.32859	7.32859	7.56096	7.56604	7.63929	7.65296	7.71045	7.71823
3.7	7.32795	7.32814	7.32922	7.32923	7.56283	7.56672	7.64223	7.65335	7.71221	7.71867
3.8	7.32857	7.32878	7.32986	7.32986	7.56434	7.56736	7.64457	7.65378	7.71371	7.71914
3.9	7.32916	7.32938	7.33046	7.33047	7.56557	7.56795	7.64643	7.65423	7.71499	7.71963
4	7.32971	7.32993	7.33103	7.33103	7.56658	7.56849	7.64793	7.65468	7.71607	7.7201
4.1	7.3302	7.33043	7.33155	7.33155	7.56743	7.56899	7.64914	7.65511	7.71698	7.72054
4.2	7.33065	7.33088	7.33202	7.33202	7.56814	7.56944	7.65011	7.65551	7.71774	7.72096
4.3	7.33105	7.33128	7.33244	7.33244	7.56873	7.56985	7.65091	7.65588	7.71838	7.72134
4.4	7.3314	7.33164	7.33281	7.33281	7.56923	7.57021	7.65155	7.65621	7.71892	7.72168
4.5	7.33171	7.33196	7.33314	7.33314	7.56965	7.57053	7.65209	7.65651	7.71938	7.72198

The spin-coupled PECs of CHI along the CI bond length										
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
1.6	3.95516	4.41079	4.41089	4.43297	5.33291	7.12651	7.91796	7.91921	7.9752	8.09266
1.65	2.86033	3.33373	3.33447	3.35455	4.29111	6.14568	6.77692	6.78035	6.83703	7.17841
1.7	2.02243	2.51206	2.51321	2.53169	3.50375	5.42319	5.87945	5.8825	5.94613	6.28035
1.72	1.74499	2.24055	2.24178	2.25977	3.24556	5.1911	5.57408	5.57691	5.64438	5.96373
1.74	1.49649	1.9977	1.99896	2.01654	3.01573	4.98731	5.29492	5.29747	5.36972	5.67155
1.76	1.27457	1.78118	1.78247	1.79966	2.81188	4.80938	5.04081	5.04309	5.11979	5.40482
1.78	1.07708	1.58885	1.59014	1.607	2.63182	4.65501	4.80864	4.81056	4.89241	5.15862
1.8	0.90202	1.41873	1.42	1.43655	2.4735	4.5219	4.59693	4.59817	4.68565	4.93197
1.82	0.74756	1.269	1.27024	1.28651	2.33508	4.39754	4.40422	4.41443	4.49776	4.72345

1.84	0.61202	1.138	1.1392	1.15521	2.21484	4.22498	4.22712	4.31342	4.32846	4.53173
1.86	0.49385	1.02421	1.02535	1.04112	2.11122	4.06391	4.06545	4.17103	4.23637	4.35563
1.88	0.39165	0.92622	0.92729	0.94284	2.02279	3.91678	3.91792	4.03035	4.1718	4.19406
1.9	0.3041	0.84275	0.84372	0.85907	1.94823	3.78256	3.78337	3.90261	4.04605	4.12071
1.92	0.23001	0.77259	0.77347	0.78863	1.88634	3.66025	3.66077	3.7868	3.91067	4.08157
1.94	0.16825	0.71466	0.71542	0.7304	1.83598	3.54888	3.54916	3.68191	3.78705	4.05234
1.96	0.11776	0.66789	0.66855	0.68335	1.7961	3.44757	3.44763	3.58697	3.67436	3.99157
1.98	0.07755	0.63133	0.63187	0.64651	1.76571	3.35537	3.35548	3.50108	3.57175	3.89239
2	0.04668	0.60405	0.6045	0.61897	1.74388	3.27158	3.27184	3.42341	3.47846	3.80192
2.02	0.02421	0.58525	0.58559	0.5999	1.72978	3.19552	3.1959	3.35313	3.39367	3.72022
2.04	0.00923	0.57413	0.57438	0.58853	1.72263	3.12641	3.12688	3.28949	3.3166	3.64647
2.066	0	0.57005	0.57018	0.58412	1.72252	3.04632	3.0469	3.21588	3.22727	3.56163
2.08	-0.00038	0.57226	0.57235	0.58616	1.72654	3.00799	3.00861	3.18062	3.18449	3.52124
2.1	0.00409	0.58039	0.58041	0.59405	1.73711	2.95891	2.95957	3.12967	3.13536	3.46965
2.12	0.01404	0.59439	0.59444	0.60786	1.75194	2.91489	2.9156	3.08062	3.09461	3.42358
2.14	0.02757	0.61397	0.61407	0.62724	1.771	2.87582	2.87653	3.03711	3.05804	3.38261
2.16	0.04475	0.63824	0.63842	0.6513	1.79366	2.84132	2.84191	2.99851	3.02513	3.34627
2.18	0.06801	0.66609	0.66639	0.67901	1.81814	2.81024	2.81074	2.96377	2.99537	3.31382
2.2	0.09578	0.69739	0.69781	0.71021	1.84453	2.78261	2.78305	2.9329	2.96866	3.28507
2.22	0.12716	0.73184	0.73243	0.74463	1.87267	2.75824	2.75862	2.90569	2.94476	3.25969
2.24	0.16176	0.76908	0.77012	0.78205	1.90245	2.73704	2.73728	2.88198	2.92346	3.23739
2.26	0.19914	0.80906	0.81028	0.82174	1.93396	2.71877	2.71889	2.86153	2.90454	3.21787
2.28	0.23852	0.8511	0.85217	0.86344	1.966	2.70331	2.70343	2.84414	2.88811	3.20127
2.3	0.27989	0.89491	0.89591	0.90706	1.99907	2.69122	2.69132	2.8302	2.87455	3.18782
2.32	0.32335	0.94071	0.94169	0.95273	2.03171	2.68035	2.68043	2.8178	2.86183	3.17568
2.34	0.36854	0.98794	0.98889	0.99985	2.06389	2.67071	2.67078	2.80695	2.8499	3.16465
2.36	0.41516	1.03639	1.03733	1.04822	2.09567	2.66255	2.66259	2.7978	2.83908	3.15497
2.38	0.46301	1.08596	1.08688	1.09771	2.12691	2.65581	2.65582	2.79021	2.82934	3.14662
2.4	0.51189	1.13639	1.13731	1.14808	2.15746	2.65034	2.65035	2.78404	2.82058	3.13944
2.42	0.56162	1.18749	1.1884	1.19912	2.18715	2.64602	2.64606	2.77913	2.8127	3.13327
2.44	0.61203	1.23907	1.23998	1.25067	2.21588	2.64274	2.64279	2.77531	2.80562	3.12801
2.46	0.66299	1.29098	1.29189	1.30254	2.24353	2.64037	2.64045	2.77245	2.79923	3.12352
2.48	0.71435	1.34306	1.34396	1.35459	2.27002	2.63882	2.63892	2.77041	2.79348	3.11971
2.5	0.76597	1.39516	1.39606	1.40668	2.29531	2.63799	2.63811	2.76906	2.78828	3.11649
2.52	0.81775	1.44714	1.44804	1.45866	2.31936	2.63779	2.63793	2.76829	2.7836	3.11378
2.54	0.86957	1.49888	1.49978	1.5104	2.34217	2.63815	2.63831	2.76801	2.77938	3.11151
2.56	0.92133	1.55025	1.55116	1.5618	2.36375	2.63901	2.63918	2.7681	2.77557	3.10963
2.58	0.97292	1.60114	1.60206	1.61272	2.38414	2.64031	2.6405	2.76851	2.77215	3.1081
2.6	1.02426	1.65144	1.65237	1.66305	2.40339	2.64202	2.64222	2.7691	2.76916	3.10688
2.65	1.15082	1.77384	1.77481	1.7856	2.44704	2.64797	2.64819	2.76309	2.77158	3.10514
2.7	1.27412	1.89051	1.89151	1.90245	2.48457	2.65545	2.6557	2.7588	2.77434	3.10468
2.75	1.3938	2.0007	2.00173	2.01288	2.51577	2.66276	2.66302	2.755	2.77615	3.1002
2.8	1.5089	2.10319	2.10421	2.11563	2.54199	2.66996	2.67022	2.75186	2.77703	3.07381

2.85	1.61869	2.19698	2.19797	2.20969	2.56421	2.677	2.67726	2.74917	2.77702	3.04035
2.9	1.7227	2.2814	2.28235	2.29434	2.58328	2.68396	2.68422	2.74716	2.77637	3.00805
2.95	1.82063	2.35607	2.35695	2.36918	2.59986	2.69087	2.69111	2.74589	2.77529	2.9778
3	1.91234	2.42093	2.42169	2.4341	2.61448	2.69774	2.69795	2.7453	2.77401	2.95
3.05	1.99771	2.47618	2.47682	2.48929	2.6275	2.7045	2.70468	2.74533	2.77264	2.92478
3.1	2.07663	2.52233	2.52283	2.53525	2.63912	2.711	2.71113	2.7458	2.77121	2.90205
3.15	2.14913	2.56024	2.5606	2.57283	2.64951	2.71713	2.71721	2.74657	2.76975	2.88171
3.2	2.21532	2.59103	2.59125	2.60316	2.65887	2.72287	2.72288	2.74757	2.76836	2.86364
3.25	2.27545	2.61586	2.61598	2.62745	2.66729	2.72804	2.72809	2.74874	2.76703	2.8477
3.3	2.32976	2.63591	2.63593	2.64688	2.67491	2.73265	2.73278	2.75003	2.7658	2.83376
3.35	2.37859	2.65216	2.65221	2.66248	2.68187	2.73679	2.73699	2.75138	2.76471	2.82164
3.4	2.4223	2.66549	2.66559	2.67512	2.68823	2.74043	2.7407	2.75276	2.76377	2.81117
3.45	2.46126	2.67659	2.67671	2.68548	2.69405	2.74361	2.74394	2.75414	2.76295	2.80222
3.5	2.49587	2.68594	2.6861	2.6941	2.69941	2.74636	2.74675	2.75549	2.76224	2.79463
3.55	2.52652	2.69395	2.69412	2.70137	2.70435	2.7487	2.74915	2.75682	2.76162	2.78827
3.6	2.55359	2.70088	2.70107	2.70759	2.70892	2.75066	2.75117	2.7581	2.76106	2.78305
3.7	2.59849	2.71232	2.71255	2.71705	2.71774	2.75346	2.75408	2.75992	2.76051	2.77558
3.8	2.63327	2.72138	2.72167	2.72406	2.72573	2.7547	2.75548	2.75859	2.76271	2.77126
3.9	2.66024	2.72873	2.72917	2.73024	2.73226	2.75462	2.75554	2.75725	2.76474	2.76952
	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
1.6	8.09324	8.09945	8.36447	8.36831	9.05128	9.08655	9.08903	9.10249	9.1095	9.17801
1.65	7.18733	7.19463	7.21409	7.50892	7.79473	7.79685	7.82561	8.02525	8.03361	8.07768
1.7	6.46434	6.4675	6.47214	6.76316	6.77791	6.81311	6.82	7.22059	7.23025	7.26896
1.72	6.22078	6.2247	6.22918	6.4155	6.43134	6.47028	6.58806	6.95518	6.96501	7.00337
1.74	6.00071	6.00839	6.01058	6.09532	6.11445	6.15597	6.37966	6.71769	6.72758	6.76612
1.76	5.78039	5.78509	5.80425	5.82893	5.84467	5.87616	6.19013	6.50558	6.51543	6.55473
1.78	5.529	5.53914	5.60574	5.63547	5.63671	5.6394	6.0161	6.31657	6.32631	6.36661
1.8	5.28771	5.30276	5.38047	5.46134	5.46836	5.46893	5.85442	6.14871	6.15829	6.19957
1.82	5.06693	5.08462	5.17002	5.30798	5.31449	5.3161	5.70227	5.99965	6.00896	6.05154
1.84	4.86572	4.88533	4.97865	5.16754	5.1738	5.17575	5.55705	5.86765	5.87663	5.92058
1.86	4.68271	4.70389	4.80507	5.03808	5.04434	5.0463	5.41666	5.75106	5.75964	5.80489
1.88	4.51652	4.539	4.64778	4.91828	4.92467	4.92644	5.27965	5.64832	5.65644	5.7028
1.9	4.36584	4.38943	4.50533	4.80702	4.81366	4.8151	5.14538	5.55794	5.56553	5.61274
1.92	4.22953	4.25397	4.3764	4.70338	4.71034	4.71137	5.01404	5.47851	5.48551	5.53327
1.94	4.10721	4.13151	4.25978	4.60658	4.61389	4.61446	4.88643	5.40862	5.41488	5.4631
1.96	4.02097	4.03789	4.15435	4.51594	4.52361	4.52371	4.76368	5.34671	5.35197	5.40098
1.98	3.92135	4.02569	4.05908	4.43086	4.43856	4.43889	4.64723	5.29085	5.29447	5.3458
2	3.83164	3.97304	4.02124	4.35084	4.3586	4.3592	4.53798	5.23828	5.23868	5.29662
2.02	3.7509	3.89535	4.02165	4.27549	4.2837	4.28415	4.43714	5.17937	5.18485	5.25288
2.04	3.67817	3.8252	4.02322	4.20462	4.21357	4.21435	4.34712	5.11359	5.12575	5.1795
2.066	3.59471	3.74444	4.014	4.11904	4.12832	4.13445	4.25638	5.02269	5.0387	5.06677
2.08	3.55508	3.70591	3.99575	4.07511	4.08453	4.09503	4.22815	4.97366	4.98967	5.00958

2.1	3.50462	3.65669	3.95171	4.01388	4.02349	4.03779	4.21886	4.90513	4.92019	4.93254
2.12	3.45972	3.61281	3.89643	3.95616	3.96599	3.97959	4.23546	4.83879	4.85223	4.86005
2.14	3.42011	3.57412	3.8381	3.89952	3.91022	3.91923	4.27196	4.77453	4.78714	4.79177
2.16	3.38507	3.54034	3.77903	3.84556	3.85729	3.86061	4.32204	4.71239	4.72527	4.72771
2.18	3.3533	3.51025	3.72263	3.79844	3.8101	3.81115	4.36718	4.65391	4.66574	4.66745
2.2	3.32477	3.48382	3.66998	3.75524	3.76671	3.76694	4.40901	4.5991	4.60878	4.6109
2.22	3.2993	3.46092	3.62111	3.71463	3.72537	3.72668	4.44469	4.54856	4.55442	4.5601
2.24	3.27658	3.44161	3.57634	3.67459	3.68551	3.68716	4.45489	4.50019	4.50251	4.53375
2.26	3.25639	3.42549	3.53557	3.63517	3.64738	3.64883	4.42365	4.45134	4.45283	4.53084
2.28	3.23906	3.41168	3.49717	3.60036	3.61237	3.61558	4.37957	4.40384	4.40501	4.49683
2.3	3.22471	3.40087	3.46223	3.56676	3.57842	3.58405	4.33373	4.35788	4.35905	4.44799
2.32	3.21151	3.39136	3.43008	3.5364	3.54768	3.5562	4.28848	4.31362	4.31499	4.3968
2.34	3.19931	3.38291	3.40035	3.50853	3.51946	3.53148	4.24346	4.26989	4.27171	4.34588
2.36	3.18832	3.37295	3.37539	3.48241	3.49297	3.50948	4.19782	4.22632	4.22876	4.29689
2.38	3.17854	3.34785	3.36827	3.45777	3.46796	3.49034	4.1518	4.18307	4.18637	4.25043
2.4	3.16983	3.32487	3.36088	3.43443	3.44425	3.47435	4.10508	4.13947	4.14379	4.2069
2.42	3.16207	3.30382	3.35255	3.41226	3.42168	3.46185	4.05766	4.09487	4.10019	4.16636
2.44	3.15513	3.28457	3.34277	3.3911	3.40012	3.45305	4.00976	4.04886	4.05489	4.12861
2.46	3.14893	3.26694	3.33138	3.37083	3.37944	3.44778	3.96178	4.00141	4.00775	4.09329
2.48	3.14338	3.25082	3.31856	3.35135	3.35951	3.44556	3.9141	3.95302	3.95937	4.05731
2.5	3.1384	3.23607	3.30465	3.33254	3.34024	3.44576	3.86706	3.90437	3.91061	4.01039
2.52	3.13392	3.22258	3.29002	3.31432	3.32153	3.44774	3.82089	3.85611	3.86225	3.96122
2.54	3.12989	3.21025	3.27494	3.29658	3.30328	3.45097	3.77579	3.8087	3.81483	3.91148
2.56	3.12627	3.19899	3.25958	3.27928	3.28544	3.45502	3.73186	3.76244	3.7687	3.86241
2.58	3.12302	3.18873	3.24409	3.26233	3.26794	3.4595	3.68922	3.7175	3.7241	3.81458
2.6	3.12011	3.1794	3.22853	3.2457	3.25072	3.46405	3.6479	3.674	3.6812	3.76827
2.65	3.11415	3.15983	3.18962	3.20525	3.20863	3.47223	3.55058	3.57169	3.58336	3.66041
2.7	3.10904	3.14487	3.15117	3.16665	3.16776	3.45355	3.46193	3.47888	3.51273	3.57149
2.75	3.10419	3.11478	3.12894	3.13326	3.1338	3.38182	3.38717	3.3955	3.4507	3.53911
2.8	3.08263	3.08765	3.10905	3.11771	3.12628	3.3098	3.31583	3.32082	3.37461	3.54156
2.85	3.04953	3.05279	3.11088	3.116	3.1221	3.24606	3.25031	3.25435	3.30313	3.54827
2.9	3.01694	3.01914	3.11465	3.11896	3.12083	3.19084	3.19162	3.19589	3.23873	3.55501
2.95	2.98616	2.98769	3.11143	3.11913	3.12319	3.14115	3.14934	3.15114	3.18189	3.56109
3	2.95774	2.95881	3.08137	3.08957	3.09106	3.12345	3.14277	3.14482	3.14547	3.56646
3.05	2.93186	2.93262	3.04424	3.05038	3.0506	3.08258	3.15416	3.15432	3.15628	3.57111
3.1	2.90848	2.90901	3.00989	3.0147	3.01476	3.04334	3.16986	3.17045	3.17246	3.57486
3.15	2.88751	2.88788	2.97922	2.98309	2.98321	3.00853	3.18826	3.18935	3.19128	3.57706
3.2	2.86882	2.86909	2.95211	2.95531	2.95541	2.97784	3.20852	3.20981	3.21161	3.57479
3.25	2.8523	2.8525	2.92827	2.93108	2.93114	2.95099	3.22966	3.23093	3.23256	3.56263
3.3	2.83783	2.83796	2.90737	2.90995	2.90997	2.9275	3.25083	3.25196	3.25341	3.54915
3.35	2.8252	2.82528	2.88911	2.89151	2.89152	2.90697	3.27139	3.27231	3.27359	3.53744
3.4	2.81427	2.81431	2.87317	2.87547	2.8755	2.88906	3.29084	3.29156	3.29266	3.52729
3.45	2.80486	2.80487	2.85929	2.86155	2.86159	2.87346	3.3089	3.30942	3.31037	3.51849

3.5	2.79682	2.79683	2.84722	2.84949	2.84954	2.85988	3.32542	3.32577	3.32659	3.51081
3.55	2.79002	2.79004	2.83676	2.83905	2.8391	2.84809	3.34037	3.34058	3.34127	3.50385
3.6	2.78435	2.78438	2.82769	2.83003	2.83007	2.83786	3.35378	3.35389	3.35446	3.49686
3.7	2.77603	2.77612	2.8131	2.81552	2.81556	2.82131	3.37634	3.37636	3.37674	3.4845
3.8	2.77131	2.77169	2.80231	2.80479	2.80482	2.80893	3.39402	3.39411	3.39429	3.47548
3.9	2.76958	2.7701	2.79448	2.79698	2.797	2.79974	3.40793	3.40804	3.40811	3.46924
	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
1.6	9.54035	9.54037	9.54273	9.80446	10.70631	10.76755	10.78146	10.93409	10.94344	10.94918
1.65	8.6701	8.6706	8.6754	8.99828	9.42551	9.4716	9.48657	9.72143	9.72842	9.89903
1.7	7.96839	7.97142	7.97729	8.34328	8.40421	8.44594	8.46869	8.65003	8.69744	9.03737
1.72	7.72928	7.73446	7.74081	8.04836	8.09626	8.12206	8.12366	8.28243	8.34848	8.67403
1.74	7.50823	7.5171	7.52401	7.71847	7.77777	7.80566	7.91437	7.94783	8.04123	8.33536
1.76	7.30082	7.31727	7.32475	7.41444	7.4881	7.51638	7.64432	7.67929	7.80616	8.02712
1.78	7.09119	7.13367	7.13753	7.15217	7.2248	7.25047	7.36905	7.42624	7.62891	7.74754
1.8	6.84986	6.93584	6.95828	6.97067	6.99521	7.01122	7.12198	7.18627	7.4641	7.49499
1.82	6.61504	6.73465	6.77938	6.80013	6.80696	6.8115	6.89914	6.96544	7.26785	7.27513
1.84	6.40047	6.53799	6.58165	6.63005	6.64998	6.65967	6.7002	6.76383	7.06415	7.08173
1.86	6.20772	6.35363	6.39516	6.46479	6.50794	6.51235	6.5333	6.58048	6.88158	6.90382
1.88	6.03632	6.18257	6.22262	6.30171	6.36572	6.37644	6.39991	6.41437	6.71748	6.74288
1.9	5.88479	6.02406	6.06321	6.14602	6.23127	6.25326	6.26625	6.28151	6.56904	6.59727
1.92	5.75096	5.87709	5.91607	6.00081	6.10886	6.12539	6.14796	6.17402	6.43363	6.46495
1.94	5.6323	5.74075	5.78052	5.86676	5.99757	6.00432	6.04666	6.07631	6.30908	6.34414
1.96	5.52646	5.61429	5.65618	5.74375	5.8959	5.89669	5.95483	5.98707	6.1937	6.23348
1.98	5.43186	5.49732	5.54314	5.6314	5.79982	5.80532	5.87066	5.90455	6.08638	6.13206
2	5.34763	5.39074	5.44237	5.52911	5.71547	5.72227	5.79231	5.82657	5.98662	6.03371
2.02	5.26744	5.30318	5.35612	5.43618	5.64217	5.64612	5.71783	5.75078	5.89456	5.90945
2.04	5.21407	5.24698	5.2874	5.3521	5.57526	5.57904	5.64564	5.67534	5.79124	5.79263
2.066	5.16882	5.19868	5.22524	5.25637	5.48804	5.5092	5.55467	5.57603	5.64692	5.64849
2.08	5.14609	5.17332	5.2029	5.21514	5.4416	5.47318	5.50938	5.52109	5.57264	5.57437
2.1	5.1155	5.11819	5.18192	5.18421	5.37389	5.41073	5.44068	5.45894	5.46966	5.47181
2.12	5.05134	5.08546	5.16909	5.17162	5.30486	5.33883	5.36025	5.37126	5.37443	5.41211
2.14	4.97431	5.05795	5.16407	5.16793	5.23447	5.26359	5.27626	5.27757	5.28352	5.33986
2.16	4.89504	5.03169	5.13487	5.13633	5.16676	5.17832	5.19102	5.19551	5.20606	5.24991
2.18	4.82934	5.0022	5.06146	5.06817	5.09966	5.1033	5.11749	5.11907	5.13016	5.16127
2.2	4.76984	4.96835	4.981	4.98892	5.02882	5.03513	5.04592	5.04974	5.05597	5.07616
2.22	4.71525	4.90041	4.90241	4.93485	4.95828	4.96335	4.98262	4.98376	4.98616	4.99885
2.24	4.67384	4.82092	4.82274	4.88134	4.88907	4.89162	4.91392	4.91635	4.92149	4.95999
2.26	4.66954	4.74226	4.74309	4.81245	4.82188	4.82279	4.84523	4.85307	4.86042	4.94853
2.28	4.66441	4.66499	4.69279	4.73913	4.75703	4.75725	4.78158	4.79194	4.80286	4.92084
2.3	4.58788	4.58833	4.66476	4.69238	4.694	4.70642	4.72064	4.73353	4.76985	4.85976
2.32	4.51429	4.51549	4.59266	4.63394	4.63443	4.66332	4.6636	4.67834	4.7769	4.79478
2.34	4.44417	4.44615	4.52283	4.57782	4.57811	4.60889	4.61134	4.62522	4.73195	4.73688

2.36	4.37754	4.3804	4.45494	4.5244	4.52459	4.55676	4.55962	4.57405	4.67113	4.68027
2.38	4.31423	4.31812	4.38901	4.47351	4.47364	4.50678	4.50956	4.52483	4.61202	4.62257
2.4	4.25473	4.25986	4.32506	4.42501	4.4251	4.45883	4.46137	4.47751	4.55466	4.56577
2.42	4.1996	4.20625	4.26334	4.37879	4.37886	4.41283	4.41505	4.43203	4.49909	4.51038
2.44	4.1491	4.15777	4.20406	4.33472	4.33477	4.36868	4.37056	4.38835	4.44537	4.4567
2.46	4.10248	4.11442	4.14805	4.29269	4.29273	4.32632	4.32783	4.34639	4.39359	4.40489
2.48	4.06007	4.07568	4.09711	4.25261	4.25263	4.28567	4.28677	4.30611	4.3438	4.35511
2.5	4.02869	4.0408	4.0535	4.21437	4.21438	4.24665	4.24729	4.26745	4.29608	4.30749
2.52	3.99895	4.00905	4.0169	4.17788	4.1779	4.2092	4.20929	4.23034	4.25046	4.26212
2.54	3.97076	3.97982	3.98503	4.14307	4.14309	4.17265	4.17324	4.19475	4.20696	4.2191
2.56	3.94409	3.95267	3.95625	4.10986	4.10987	4.13726	4.1387	4.16061	4.1656	4.17851
2.58	3.91889	3.9273	3.92978	4.07818	4.07819	4.10304	4.10552	4.12636	4.12787	4.14038
2.6	3.89512	3.90348	3.90518	4.04795	4.04796	4.06995	4.07364	4.08921	4.09648	4.10469
2.65	3.84161	3.84988	3.85048	3.97843	3.97843	3.9923	3.99926	4.00531	4.02318	4.02579
2.7	3.79593	3.8038	3.80408	3.91672	3.91672	3.92295	3.93135	3.93415	3.95634	3.95956
2.75	3.75724	3.76429	3.76478	3.86162	3.86164	3.86248	3.87	3.87372	3.89722	3.901
2.8	3.72459	3.73041	3.73155	3.81031	3.81253	3.81254	3.81687	3.82079	3.84505	3.84864
2.85	3.69714	3.70127	3.70353	3.76563	3.76887	3.76888	3.77113	3.77451	3.79897	3.80191
2.9	3.67426	3.6765	3.68015	3.72726	3.73017	3.73017	3.73169	3.73421	3.75834	3.76034
2.95	3.65473	3.65628	3.66083	3.6942	3.69597	3.69597	3.69763	3.69914	3.7226	3.72361
3	3.63721	3.64071	3.64481	3.66567	3.66586	3.66587	3.66832	3.66866	3.69083	3.69196
3.05	3.6219	3.62786	3.63061	3.63943	3.63943	3.64112	3.64211	3.64384	3.66263	3.66489
3.1	3.60771	3.61461	3.61578	3.61623	3.61625	3.61901	3.62058	3.62589	3.63846	3.64174
3.15	3.59297	3.5959	3.5959	3.59655	3.59902	3.60145	3.60474	3.61188	3.61925	3.62488
3.2	3.57767	3.57813	3.57814	3.57963	3.58269	3.58644	3.58912	3.59923	3.60582	3.61209
3.25	3.56263	3.56322	3.56347	3.56452	3.57043	3.57191	3.57341	3.59034	3.59239	3.59321
3.3	3.54915	3.5502	3.55052	3.55119	3.55781	3.55833	3.55898	3.57233	3.57248	3.57525
3.35	3.53744	3.53866	3.53887	3.53948	3.54565	3.54596	3.54614	3.55506	3.5551	3.55813
3.4	3.52729	3.5285	3.52861	3.5292	3.53456	3.53464	3.53495	3.54006	3.54008	3.54323
3.45	3.51849	3.51959	3.51961	3.52015	3.52444	3.52451	3.52495	3.52721	3.52723	3.53059
3.5	3.51081	3.51161	3.5117	3.51207	3.51519	3.51528	3.51579	3.51638	3.51647	3.52021
3.55	3.50392	3.50414	3.50449	3.50455	3.50693	3.50694	3.50763	3.50768	3.5079	3.51187
3.6	3.49689	3.49727	3.49753	3.49761	3.50024	3.50024	3.50099	3.50103	3.50127	3.50506
3.7	3.4845	3.48515	3.48524	3.48544	3.49095	3.49095	3.49137	3.49143	3.49156	3.49461
3.8	3.47549	3.47601	3.47616	3.4763	3.4846	3.48462	3.48464	3.48469	3.48469	3.48716
3.9	3.46926	3.46962	3.46983	3.46991	3.47983	3.47989	3.47994	3.48026	3.48026	3.48187
	#31	#32	#33	#34	#35	#36	#37	#38	#39	#40
1.6	10.98961	10.9897	11.03374	11.06764	11.33047	11.33367	11.36654	11.56382	11.58805	11.59459
1.65	9.90868	9.91694	9.95663	9.95738	10.13602	10.14469	10.18873	10.29421	10.31051	10.31287
1.7	9.04183	9.04963	9.05789	9.06289	9.09305	9.09958	9.11834	9.41044	9.41847	9.43266
1.72	8.69442	8.73656	8.73841	8.74515	8.75778	8.79758	8.79769	9.10305	9.11028	9.12626
1.74	8.35869	8.39913	8.45626	8.46332	8.47896	8.51671	8.51772	8.81796	8.82464	8.84209

1.76	8.05429	8.08865	8.19502	8.20132	8.21936	8.2555	8.25719	8.55291	8.55919	8.57791
1.78	7.78162	7.80676	7.9509	7.95645	7.97717	8.01178	8.01417	8.3059	8.31185	8.33176
1.8	7.54922	7.55207	7.72215	7.727	7.75072	7.78382	7.78703	8.07511	8.08078	8.10182
1.82	7.32304	7.38168	7.50729	7.51149	7.53857	7.57024	7.57443	7.85896	7.86437	7.88652
1.84	7.11777	7.25331	7.30504	7.30865	7.33945	7.36981	7.37517	7.65601	7.66119	7.68443
1.86	6.93403	7.11427	7.11738	7.13835	7.15299	7.18142	7.18842	7.46501	7.46999	7.49434
1.88	6.76933	6.93402	6.93671	6.97528	7.00408	7.00988	7.03696	7.28487	7.28966	7.31522
1.9	6.6211	6.76349	6.76583	6.80896	6.83695	6.84511	6.93645	7.11464	7.11925	7.14623
1.92	6.48703	6.60195	6.60401	6.65182	6.67929	6.68881	6.84089	6.9535	6.95791	6.98695
1.94	6.36529	6.44879	6.45064	6.50326	6.53044	6.5411	6.747	6.80089	6.80492	6.83807
1.96	6.25462	6.30346	6.30513	6.36276	6.38993	6.40144	6.64556	6.65829	6.6596	6.70576
1.98	6.15427	6.16545	6.16704	6.22997	6.25745	6.26937	6.5151	6.5214	6.53268	6.60357
2	6.03561	6.03955	6.06396	6.10507	6.1334	6.14472	6.38384	6.38984	6.40576	6.52075
2.02	5.91097	5.9509	5.97966	5.99048	6.02183	6.02843	6.25827	6.26456	6.28141	6.42611
2.04	5.81133	5.85536	5.88622	5.89196	5.92744	5.93854	6.13854	6.14553	6.16162	6.30173
2.066	5.71764	5.72257	5.75667	5.76596	5.83885	5.86615	5.99162	6.00069	6.01338	6.15195
2.08	5.65256	5.67346	5.69159	5.69839	5.80488	5.83517	5.91579	5.92765	5.93632	6.07589
2.1	5.55592	5.59365	5.60719	5.63382	5.76515	5.78688	5.81142	5.82874	5.83922	5.97206
2.12	5.46987	5.51314	5.53052	5.60687	5.6992	5.7027	5.72603	5.74193	5.79692	5.87543
2.14	5.41194	5.45286	5.47789	5.5957	5.60057	5.61353	5.63091	5.70186	5.77459	5.78536
2.16	5.37688	5.40981	5.4374	5.50433	5.51504	5.55585	5.59869	5.63573	5.68794	5.73873
2.18	5.3195	5.34064	5.3841	5.46419	5.49048	5.52137	5.53547	5.55658	5.58909	5.67082
2.2	5.2473	5.26418	5.31283	5.45453	5.45981	5.48456	5.48489	5.50333	5.51609	5.59512
2.22	5.17321	5.19012	5.23669	5.38366	5.3945	5.40033	5.48438	5.48927	5.49425	5.5432
2.24	5.09119	5.11269	5.15496	5.28698	5.32027	5.32133	5.38585	5.41941	5.51043	5.52037
2.26	5.00158	5.02144	5.06361	5.17552	5.24849	5.24955	5.27227	5.33981	5.44296	5.44578
2.28	4.93279	4.94872	4.98846	5.09118	5.17526	5.18116	5.18884	5.26086	5.36784	5.37797
2.3	4.88414	4.89566	4.92452	5.01258	5.09759	5.11419	5.11717	5.18286	5.28162	5.31508
2.32	4.84107	4.84299	4.89059	4.94016	5.02225	5.05037	5.05206	5.10941	5.19277	5.25568
2.34	4.77865	4.85619	4.86972	4.88099	4.95124	4.98913	4.99041	5.04205	5.10601	5.19896
2.36	4.7173	4.80608	4.85218	4.88388	4.90018	4.93017	4.93141	4.98743	5.02271	5.14407
2.38	4.65782	4.74632	4.81905	4.83653	4.87152	4.87573	4.88504	4.94338	4.98696	5.08821
2.4	4.60025	4.68895	4.75807	4.80907	4.81583	4.83113	4.83495	4.86844	5.02663	5.03201
2.42	4.5446	4.6341	4.69981	4.75933	4.76138	4.77372	4.79512	4.82281	4.97668	4.98521
2.44	4.49077	4.58162	4.64428	4.70729	4.7083	4.71726	4.72852	4.81415	4.92181	4.93298
2.46	4.43878	4.53133	4.5913	4.65584	4.65657	4.66254	4.6652	4.80914	4.86716	4.88054
2.48	4.38865	4.48305	4.54072	4.60302	4.60616	4.60789	4.60972	4.8065	4.8129	4.82791
2.5	4.34043	4.43667	4.49235	4.54714	4.55703	4.55818	4.55883	4.75839	4.77532	4.80681
2.52	4.29416	4.39208	4.44605	4.49356	4.50906	4.50998	4.51055	4.70481	4.72313	4.80842
2.54	4.24992	4.3492	4.40167	4.44273	4.4621	4.46322	4.46431	4.65218	4.67176	4.75471
2.56	4.20774	4.30797	4.35909	4.39452	4.41661	4.41808	4.4194	4.60084	4.62158	4.69548
2.58	4.16766	4.26834	4.3182	4.34872	4.37272	4.37433	4.37583	4.55104	4.57288	4.63903
2.6	4.1297	4.23025	4.27889	4.30515	4.3304	4.33195	4.33358	4.50296	4.52583	4.58528

2.65	4.04393	4.14154	4.18694	4.20483	4.23106	4.23202	4.23376	4.39089	4.41601	4.46191
2.7	3.97032	4.06185	4.10332	4.11536	4.14006	4.1412	4.14238	4.29091	4.31774	4.35326
2.75	3.90701	3.99087	4.02751	4.03554	4.05741	4.05957	4.0597	4.20308	4.23088	4.2583
2.8	3.85207	3.92792	3.95883	3.96412	3.98295	3.98525	3.98618	4.1262	4.15414	4.17524
2.85	3.80405	3.87248	3.8968	3.90025	3.91625	3.91854	3.92055	4.05917	4.08668	4.10264
2.9	3.76192	3.82386	3.84103	3.84327	3.85682	3.85907	3.8623	4.0008	4.0273	4.03924
2.95	3.72498	3.78119	3.79117	3.79262	3.80412	3.80633	3.81129	3.95004	3.97506	3.98397
3	3.69273	3.74333	3.74686	3.74779	3.75765	3.75982	3.76777	3.90604	3.92931	3.93594
3.05	3.66538	3.70767	3.70827	3.70867	3.71686	3.71901	3.73233	3.86797	3.88935	3.8943
3.1	3.64363	3.67315	3.67352	3.67638	3.68126	3.68343	3.70469	3.83501	3.85446	3.85817
3.15	3.62742	3.64289	3.64308	3.64696	3.65061	3.65295	3.6833	3.80646	3.82402	3.82683
3.2	3.61447	3.61658	3.61693	3.62123	3.62676	3.62926	3.66668	3.78174	3.79749	3.79963
3.25	3.5946	3.59558	3.59915	3.60281	3.61615	3.61746	3.65386	3.76043	3.77445	3.77612
3.3	3.57582	3.5761	3.59551	3.59665	3.61195	3.61272	3.64404	3.74206	3.75448	3.75582
3.35	3.55836	3.55892	3.59202	3.5982	3.60984	3.61035	3.63662	3.72623	3.73719	3.73827
3.4	3.54331	3.54394	3.59035	3.60033	3.60891	3.60926	3.6311	3.71262	3.72224	3.72315
3.45	3.53062	3.53121	3.58997	3.60259	3.60882	3.60904	3.62711	3.70094	3.70935	3.71012
3.5	3.52026	3.52072	3.5906	3.60483	3.60933	3.60946	3.62431	3.69093	3.69826	3.69892
3.55	3.51197	3.51224	3.59201	3.60702	3.61029	3.61038	3.62245	3.68237	3.68873	3.68931
3.6	3.50519	3.50533	3.59399	3.60913	3.61158	3.61165	3.62134	3.67507	3.68055	3.68108
3.7	3.49471	3.49473	3.59899	3.61314	3.61475	3.61484	3.62073	3.66358	3.6676	3.66805
3.8	3.48717	3.48719	3.60459	3.61698	3.61827	3.61828	3.62152	3.65536	3.65822	3.6586
3.9	3.48188	3.48198	3.61013	3.6207	3.62167	3.62185	3.62318	3.64965	3.65161	3.65187
	#41	#42	#43	#44	#45	#46	#47	#48	#49	#50
1.6	12.33193	12.33391	12.36285	12.38001	12.38567	14.39233	14.3941	14.39894	14.40743	14.40793
1.65	11.07262	11.07632	11.10748	11.13175	11.13688	13.17589	13.17753	13.18217	13.19013	13.19062
1.7	10.0338	10.03941	10.07334	10.10465	10.10954	12.16523	12.1667	12.17134	12.17868	12.17919
1.72	9.67185	9.67828	9.71367	9.74769	9.75257	11.80699	11.80843	11.813	11.82022	11.82074
1.74	9.33643	9.34371	9.38078	9.41744	9.42235	11.47069	11.47212	11.47661	11.48378	11.48428
1.76	9.02509	9.03322	9.07225	9.11142	9.11641	11.15388	11.15534	11.15973	11.16691	11.16739
1.78	8.7356	8.74459	8.78589	8.8274	8.83253	10.85443	10.85592	10.8602	10.86745	10.8679
1.8	8.46594	8.47579	8.51961	8.56326	8.56857	10.57041	10.57195	10.57612	10.58349	10.58392
1.82	8.21439	8.22506	8.27176	8.31725	8.3228	10.30016	10.30177	10.30582	10.31337	10.31377
1.84	7.97939	7.99083	8.04077	8.08776	8.09362	10.04223	10.04393	10.04786	10.05565	10.05602
1.86	7.75956	7.7717	7.82525	7.87336	7.8796	9.79537	9.79718	9.801	9.80908	9.80942
1.88	7.55368	7.56642	7.62397	7.67277	7.67948	9.5585	9.56043	9.56415	9.57258	9.57289
1.9	7.36069	7.3739	7.43585	7.48487	7.49213	9.33071	9.33279	9.33641	9.34524	9.34553
1.92	7.17963	7.19317	7.25989	7.30863	7.31654	9.11123	9.11348	9.11701	9.12632	9.12658
1.94	7.00966	7.02337	7.09523	7.14315	7.15183	8.89942	8.90187	8.9053	8.91516	8.9154
1.96	6.84998	6.86371	6.94103	6.9876	6.99718	8.69474	8.69741	8.70076	8.71124	8.71145
1.98	6.69989	6.71354	6.79656	6.84122	6.85185	8.49674	8.49966	8.50293	8.51412	8.51431
2	6.55876	6.57265	6.66117	6.70335	6.7152	8.30505	8.30826	8.31144	8.32343	8.3236

2.02	6.43378	6.45368	6.5344	6.57347	6.58675	8.11941	8.12294	8.12604	8.13893	8.13908
2.04	6.31217	6.38535	6.41605	6.45136	6.4663	7.93971	7.94361	7.94663	7.96054	7.96068
2.066	6.16259	6.27446	6.30264	6.31305	6.3213	7.71484	7.71928	7.72222	7.73764	7.73776
2.08	6.08721	6.20311	6.22795	6.24769	6.27864	7.59716	7.60192	7.60484	7.62115	7.62127
2.1	5.98677	6.10664	6.12442	6.14706	6.2378	7.4326	7.43779	7.4408	7.4584	7.45852
2.12	5.90066	6.01828	6.02672	6.0526	6.20201	7.27402	7.27952	7.28292	7.30166	7.30181
2.14	5.84024	5.93189	5.93609	5.95809	6.16498	7.12011	7.12542	7.13011	7.14918	7.14943
2.16	5.78026	5.83905	5.84694	5.8599	6.1097	6.97176	6.97692	6.98275	7.00212	7.00248
2.18	5.69194	5.7512	5.7547	5.77697	6.02912	6.83107	6.83689	6.84251	6.86368	6.864
2.2	5.59987	5.66432	5.67535	5.7	5.93467	6.69654	6.70325	6.70836	6.73174	6.73198
2.22	5.54814	5.58712	5.6018	5.62979	5.83753	6.56845	6.57586	6.5805	6.60552	6.60571
2.24	5.54801	5.55772	5.68392	5.68495	5.79318	6.4582	6.46295	6.46767	6.48479	6.48508
2.26	5.48431	5.5095	5.87393	5.87884	5.91216	6.3688	6.36894	6.39757	6.40185	6.41007
2.28	5.41661	5.42049	5.8005	5.80522	5.83222	6.25794	6.25799	6.2993	6.30227	6.31488
2.3	5.33642	5.35875	5.70105	5.7049	5.72936	6.15107	6.15108	6.19446	6.19635	6.20994
2.32	5.26798	5.30086	5.6035	5.60614	5.62811	6.0505	6.0505	6.09401	6.09489	6.10884
2.34	5.20535	5.24627	5.51077	5.51192	5.53084	5.9556	5.95561	5.9985	5.99864	6.01262
2.36	5.14578	5.19441	5.4224	5.4231	5.43773	5.86576	5.86576	5.9068	5.90797	5.921
2.38	5.09049	5.1451	5.3372	5.34065	5.34922	5.78069	5.78072	5.8196	5.82183	5.83383
2.4	5.03839	5.09818	5.25515	5.2637	5.26664	5.7002	5.70028	5.73678	5.74007	5.75099
2.42	5.05333	5.07327	5.17499	5.19148	5.19291	5.62409	5.62424	5.65818	5.66254	5.67234
2.44	5.01089	5.09716	5.10839	5.12316	5.13869	5.55217	5.55243	5.58365	5.58909	5.59775
2.46	4.9704	5.02236	5.06097	5.0623	5.17071	5.48424	5.48464	5.51306	5.51955	5.52708
2.48	4.93183	4.95078	5.00446	5.00835	5.21471	5.42011	5.42068	5.44623	5.45377	5.46019
2.5	4.88243	4.89513	4.95314	4.95874	5.25761	5.35955	5.36035	5.38302	5.39163	5.39691
2.52	4.81794	4.86019	4.90647	4.91343	5.29803	5.30239	5.3035	5.32327	5.33349	5.33711
2.54	4.81412	4.82695	4.86386	4.8719	5.24841	5.24977	5.26681	5.27644	5.28063	5.33851
2.56	4.79533	4.82082	4.82495	4.83365	5.19743	5.19915	5.21349	5.22422	5.22732	5.37474
2.58	4.76527	4.78865	4.79823	4.83018	5.14925	5.15137	5.16316	5.17467	5.17703	5.40863
2.6	4.7367	4.75525	4.76527	4.84144	5.1037	5.10627	5.11564	5.12783	5.1296	5.43993
2.65	4.67143	4.68147	4.69193	4.87829	5.00022	5.00405	5.00815	5.02158	5.02249	5.50711
2.7	4.61417	4.61904	4.6293	4.91007	4.91486	4.91525	4.92234	4.92937	4.93432	5.55949
2.75	4.56398	4.56572	4.57544	4.83193	4.83525	4.83831	4.84973	4.84984	4.98402	5.60054
2.8	4.52006	4.52021	4.52908	4.76404	4.7663	4.77131	4.78065	4.78111	5.04787	5.63564
2.85	4.48104	4.48228	4.4893	4.70503	4.70665	4.7128	4.72057	4.72129	5.11659	5.66747
2.9	4.44787	4.44969	4.45535	4.65377	4.65499	4.66168	4.66826	4.66915	5.18813	5.69714
2.95	4.4199	4.42198	4.42663	4.60927	4.61025	4.61702	4.62272	4.6237	5.26074	5.72507
3	4.39657	4.39869	4.40258	4.57071	4.57152	4.57809	4.5831	4.5841	5.33296	5.75141
3.05	4.37732	4.37937	4.38267	4.53729	4.53799	4.54418	4.54865	4.54962	5.40356	5.77615
3.1	4.36161	4.36352	4.36634	4.50832	4.50895	4.51465	4.51868	4.51958	5.47145	5.79918
3.15	4.34896	4.35071	4.35314	4.48321	4.48377	4.48894	4.49259	4.49341	5.53583	5.82048
3.2	4.33896	4.34053	4.34263	4.46145	4.46195	4.4666	4.46991	4.47065	5.59609	5.84005
3.25	4.33122	4.33262	4.33443	4.44262	4.44308	4.44723	4.45022	4.45087	5.65183	5.85798

3.3	4.32539	4.32663	4.32819	4.42635	4.42677	4.43045	4.43315	4.43373	5.70277	5.87433
3.35	4.32115	4.32225	4.32359	4.41233	4.4127	4.41597	4.41837	4.41889	5.74877	5.88921
3.4	4.31822	4.31919	4.32034	4.40025	4.40058	4.40348	4.40561	4.40607	5.7898	5.90271
3.45	4.31635	4.31721	4.31817	4.38988	4.39016	4.39274	4.39461	4.39502	5.82595	5.91494
3.5	4.3153	4.31607	4.31687	4.38099	4.38123	4.38354	4.38515	4.38553	5.85741	5.926
3.55	4.3149	4.31559	4.31626	4.3734	4.37359	4.37567	4.37703	4.37738	5.88449	5.93598
3.6	4.31504	4.31566	4.3162	4.36692	4.36707	4.36893	4.37006	4.37038	5.90757	5.94499
3.7	4.31631	4.31681	4.31713	4.35677	4.35684	4.35835	4.35905	4.35935	5.94353	5.9604
3.8	4.31832	4.31874	4.3189	4.34955	4.34958	4.35084	4.35117	4.35148	5.96917	5.9729
3.9	4.32069	4.32105	4.32107	4.34458	4.34458	4.34568	4.3457	4.34604	5.98308	5.98837