

Supplementary information

Molecular modelling and structure-activity relationship of a natural derivative of *o*-hydroxybenzoate as a potent inhibitor of dual NSP3 and NSP12 of SARS-CoV-2: *In silico* study

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Table S1. Details of the protein backbone RMSDs, ligand RMSDs, and Radius of gyration values obtained from the MD simulation trajectory analyses

	7B3B Apo	7BF6 Apo	7B3B- STOCK1 N-45901 Complex	7B3B- STOCK1 N-03804 Complex	7B3B- STOCK1 N-08377 Complex	7B3B- STOCK1 N-83408 Complex	7BF6- STOCK1 N-45901 Complex	7BF6- STOCK1 N-03804 Complex	7BF6- STOCK1 N-08377 Complex	7BF6- STOCK1N -83408 Complex
<i>Ligand-RMSD (Å)</i>										
Average	-	-	6.09	3.73	5.19	6.36	6.36	26.31	2.38	2.43
STD	-	-	2.10	0.54	1.28	1.64	1.78	10.37	1.65	0.66
Max	-	-	9.54	5.62	7.70	9.23	8.20	45.97	6.85	4.00
Min	-	-	1.16	2.59	0.82	1.48	0.60	1.01	0.61	1.10
<i>Protein RMSD (Å)</i>										
Average	2.54	1.28	2.43	2.85	2.79	2.98	1.62	1.53	1.65	1.45
STD	0.26	0.21	0.22	0.51	0.31	0.33	0.25	0.14	0.27	0.20
Max	2.99	1.83	3.00	3.77	3.45	3.54	2.07	1.83	2.40	1.92
Min	1.49	0.72	1.39	1.31	1.16	1.27	0.67	0.68	0.72	0.80
<i>Radius of gyration (Å)</i>										
Average	-	-	3.99	5.64	4.58	4.46	4.05	4.44	4.68	4.22
STD	-	-	0.14	0.17	0.07	0.10	0.19	0.16	0.07	0.05
Max	-	-	4.37	6.15	4.85	4.75	4.37	4.96	4.90	4.35
Min	-	-	3.55	5.17	4.39	4.18	3.38	4.16	4.48	4.09

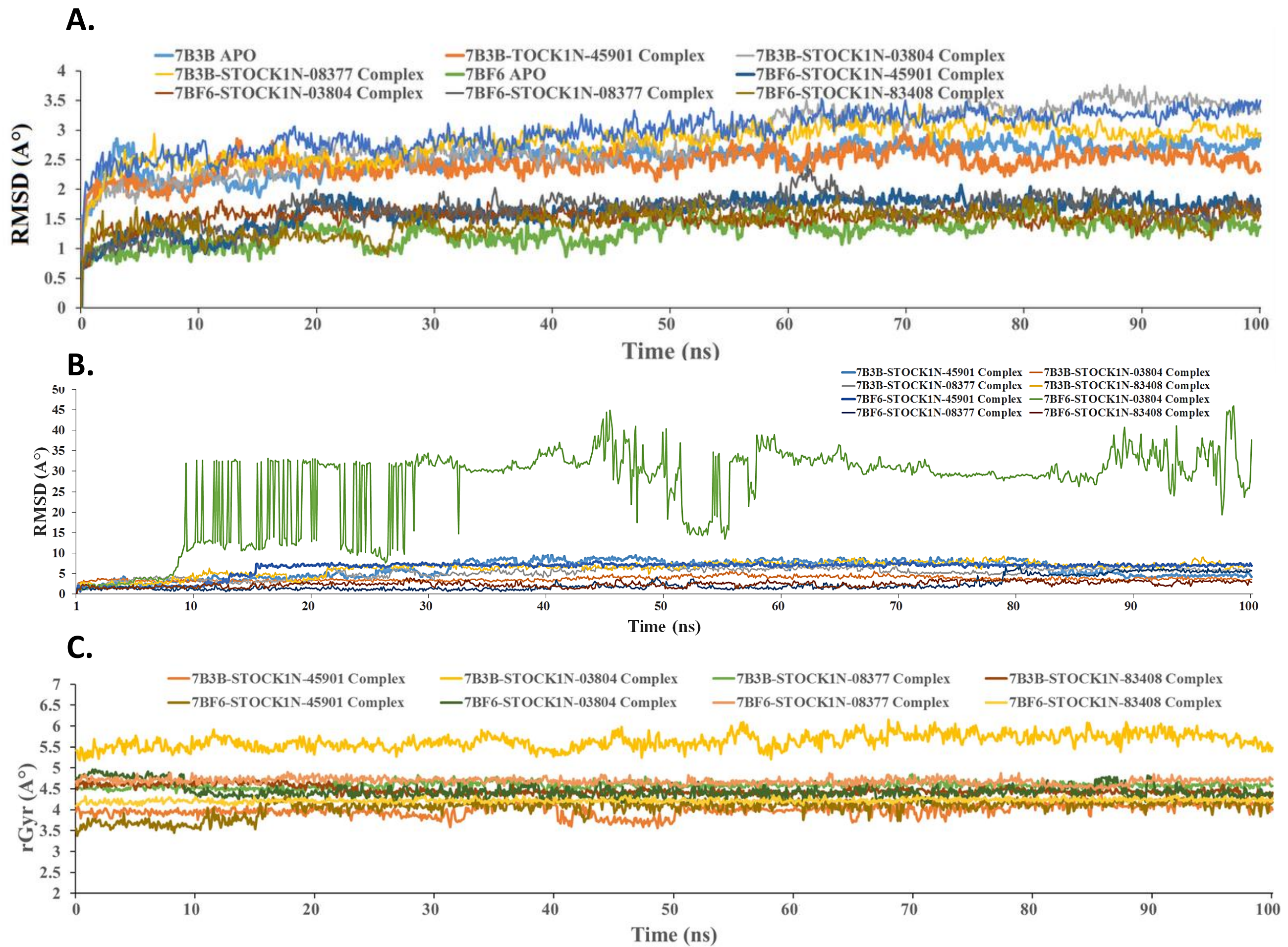


Fig. S1. Plots of **A.** Protein RMSD, **B.** Ligand RMSD and **C.** Radius of gyration of studied complexes

Table S2. Binding free energy components for nsp12-STOCK1N-45901 complex calculated by MM-GBSA approach

Frame	MMGBSA							
	ΔG_{Bind}	$\Delta G_{\text{Bind_Coulomb}}$	$\Delta G_{\text{Bind_Covalent}}$	$\Delta G_{\text{Bind_Hbond}}$	$\Delta G_{\text{Bind_Lipo}}$	$\Delta G_{\text{Bind_Packing}}$	$\Delta G_{\text{Bind_Solv_GB}}$	$\Delta G_{\text{Bind_vdW}}$
1	-46.2395	6.089645	0.390887	-0.00026	-16.4354	-0.55116	2.252533	-37.9858
2	-54.6695	2.845702	1.40181	-0.00317	-18.9759	-0.55012	2.374518	-41.7624
3	-45.5757	0.589689	1.864186	-0.00119	-14.81	-0.62017	3.75746	-36.3557
4	-46.4971	4.468801	2.515134	-0.00786	-16.4406	-0.72909	1.080083	-37.3836
5	-42.1863	2.716848	2.097698	0	-14.768	-1.11708	3.37529	-34.491
6	-52.4009	2.597816	4.331808	-0.00481	-18.7995	-0.42619	2.568103	-42.6681
7	-44.171	6.180061	1.094819	0	-15.5993	-0.00663	-0.80096	-35.0391
8	-51.3975	2.150993	2.343283	-0.00027	-17.021	-0.89623	4.883898	-42.8582
9	-46.2665	0.691786	5.69707	-0.0028	-15.3428	-1.90158	6.506535	-41.9147
10	-51.4337	5.887109	1.453472	-0.00052	-16.8698	-0.49954	-0.85423	-40.5502
11	-47.0343	5.169177	1.725936	-0.00098	-16.3914	-0.46148	1.434938	-38.5106
12	-49.4562	2.619715	3.217468	-0.00848	-16.6868	-0.69991	2.103442	-40.0016
13	-51.0691	-0.60639	2.551666	-0.01342	-17.0748	-0.50315	5.477222	-40.9002
14	-50.7447	1.927564	3.188379	-0.00171	-17.3932	-1.49588	3.326433	-40.2963
15	-43.3264	1.982125	3.664798	-0.00061	-13.8075	-0.63634	4.796919	-39.3258
16	-50.5163	1.794082	4.517235	0	-16.5976	-1.32207	4.752636	-43.6606
17	-56.0675	0.171236	2.000307	0	-17.7741	-1.20222	2.310283	-41.573
18	-52.197	3.139554	0.545042	-6.96E-05	-17.2421	-1.20777	2.862288	-40.294
19	-50.6358	2.702604	3.202358	-0.00072	-17.1688	-1.49318	2.643544	-40.5216
20	-43.4243	0.709601	2.172759	0	-13.7375	-0.70005	4.803257	-36.6723
21	-54.5767	0.970113	5.376461	-0.00982	-18.6069	-1.58283	3.370406	-44.0942
22	-46.8317	1.687553	1.538902	0	-15.7483	-0.96342	3.042876	-36.3893
23	-54.9609	-0.3789	5.039155	-0.01585	-18.7137	-2.04125	6.464838	-45.3152
24	-47.5789	-0.13443	2.913637	-0.0067	-15.2508	-1.38889	5.487383	-39.1991
25	-53.7658	-0.45866	3.176802	-0.00151	-17.6034	-1.70619	3.097003	-40.2699
26	-49.3744	3.353962	3.812341	-0.0056	-16.3804	-1.00167	1.602527	-40.7555
27	-53.5816	1.023891	6.604817	-0.43104	-16.7475	-2.42814	2.760957	-44.3646
28	-55.3811	3.947165	3.385645	-0.28298	-16.9027	-2.04378	2.083176	-45.5675
29	-50.4567	5.934797	0.998734	-0.04314	-18.8389	-0.68636	1.928876	-39.7507
30	-49.6432	5.234182	2.89484	-0.00144	-16.7137	-1.78503	1.199976	-40.4721
31	-45.5438	5.304388	3.915271	-0.00199	-15.8072	-0.0859	-0.11255	-38.7558
32	-49.0902	-0.6199	3.165042	-0.00064	-15.201	-0.71543	5.586773	-41.3051
33	-47.0089	2.332627	2.822675	-0.00311	-16.1246	-0.67599	4.060371	-39.4209
34	-49.6085	5.028803	1.405853	-0.00265	-16.0882	-2.03221	3.020324	-40.9405
35	-54.1719	-0.81032	3.287207	0	-17.505	-2.18972	3.841019	-40.795
36	-49.3923	1.043215	4.36409	-0.0051	-15.8736	-0.80518	2.551993	-40.6677
37	-47.9166	2.300263	2.529326	-0.00058	-15.3393	-1.01338	4.419026	-40.812
38	-44.9415	3.895062	1.867995	-0.00173	-14.1001	-1.46102	2.023619	-37.1653
39	-50.3467	1.195265	3.464099	-0.00136	-15.8073	-1.22424	3.451698	-41.4249
40	-49.5627	0.517625	1.917275	0	-15.2452	-2.04413	4.24046	-38.9488
41	-52.1129	2.616522	2.521957	-0.00031	-17.3583	-1.13219	2.792013	-41.5525
42	-48.9067	0.34866	2.158981	0	-16.0403	-1.15292	6.683743	-40.9048
43	-52.8916	2.046891	2.827787	0	-17.0677	-0.87847	5.243137	-45.0632
44	-46.0882	3.457956	2.746919	0	-14.7826	-1.94978	3.057957	-38.6186
45	-46.3837	0.727487	2.535322	-0.00228	-13.8701	-1.00278	4.025764	-38.7971
46	-47.7445	1.599202	2.19523	-0.00059	-15.2083	-0.84497	1.007278	-36.4924
47	-49.0662	0.971913	3.449363	-0.00034	-15.3919	-0.45573	4.747126	-42.3866
48	-45.8471	1.211701	0.984982	-0.00068	-14.488	-0.90396	4.042614	-36.6938
49	-44.1312	2.462497	1.411332	-0.00401	-13.0045	-0.5333	1.513768	-35.977
50	-46.0577	5.299787	0.787706	-0.00071	-14.7238	-1.29377	1.787388	-37.9143
51	-48.6122	2.034203	3.537594	-0.71272	-14.5541	-1.93107	5.844258	-42.8304
52	-52.743	4.468891	1.689251	-0.00384	-17.9008	-1.09724	2.669817	-42.5691
53	-49.5588	6.251252	3.015317	-0.00234	-16.3125	-0.42651	-0.25345	-41.8305
54	-47.7803	5.745084	1.852757	-0.00028	-16.3565	-0.37065	-1.02597	-37.6248
55	-50.3698	0.96752	2.702259	-0.00011	-15.9701	-1.19117	3.904706	-40.7829
56	-51.2185	-0.63525	2.339444	-0.00051	-15.984	-1.39176	4.881907	-40.4284
57	-52.726	3.085503	1.849462	0	-16.9763	-1.46488	4.223749	-43.4435
58	-44.6414	2.353392	3.01213	-0.0656	-16.0749	-0.98296	6.236331	-39.1198
59	-49.0118	5.911942	3.202929	-0.07625	-16.0902	-0.7726	2.487468	-43.6752
60	-46.7066	3.306132	3.813166	-0.4025	-15.3566	-2.08308	5.267677	-41.2514
61	-45.2886	3.424127	2.77109	0	-15.0636	-0.55421	5.574649	-41.4407
62	-48.9865	0.426948	2.223553	-0.00534	-16.5864	-0.58606	5.447203	-39.9065
63	-51.4691	0.313348	2.600219	-0.00031	-17.8753	-0.61824	5.161124	-41.05
64	-42.765	4.442547	3.275489	-0.00039	-14.2918	-0.16879	4.847155	-40.8692
65	-43.5034	6.619233	1.069994	-0.00257	-15.6805	-0.03632	0.330128	-35.8034

66	-46.5358	4.566087	2.374466	-0.00095	-16.3895	-0.60379	1.294207	-37.7763
67	-49.357	4.264623	1.933307	-0.00013	-16.81	-0.68724	2.664993	-40.7226
68	-49.8331	3.235085	2.217247	-0.0045	-15.4983	-0.82742	2.194702	-41.15
69	-45.7843	0.521668	3.454595	-0.52325	-13.783	-1.46874	4.369796	-38.3554
70	-49.7144	3.269015	2.915722	-0.00157	-16.9106	-1.29737	2.427414	-40.117
71	-64.4557	2.84314	1.838515	-0.00167	-18.5493	-2.3844	1.078447	-49.2804
72	-54.2315	5.169996	3.294101	-0.04082	-17.7086	-2.12381	4.167512	-46.9899
73	-53.5041	6.691236	2.140312	-0.01081	-17.9106	-2.88435	3.980609	-45.5105
74	-54.7558	5.876137	4.466871	-0.00114	-18.5631	-1.33152	0.197357	-45.4004
75	-49.3775	7.593719	2.442702	-0.00582	-16.9802	-2.37906	2.351178	-42.4
76	-51.7134	4.796426	0.869642	-0.00026	-19.3402	-0.99634	3.091959	-40.1346
77	-48.4744	3.134321	3.326717	-0.37179	-15.025	-1.98679	5.287138	-42.8389
78	-51.5682	-1.74268	6.17784	-0.72188	-16.0882	-3.10646	10.48899	-46.5758
79	-55.3169	-0.47216	4.5227	-0.17153	-17.4681	-1.74954	7.496732	-47.475
80	-51.8918	2.477781	1.517463	-0.71977	-15.4165	-2.69704	5.44153	-42.4953
81	-58.5621	0.338981	3.292509	-0.16907	-19.3363	-2.90821	8.736181	-48.5162
82	-54.1471	0.318581	2.982781	-0.01806	-17.9948	-2.69208	8.550327	-45.2939
83	-44.037	3.819443	1.827732	-0.00513	-15.163	-0.13718	3.293414	-37.6723
84	-50.656	1.773751	1.931697	-0.00287	-17.5493	-0.84375	5.391437	-41.357
85	-48.9253	2.98992	5.625459	-0.00193	-17.743	-1.18492	3.584366	-42.1952
86	-48.7909	5.319791	2.515386	-0.00244	-16.5801	-2.5232	3.565286	-41.0856
87	-54.0825	4.712203	3.759983	-0.00589	-17.5278	-1.30865	1.319946	-45.0323
88	-46.7081	3.097509	2.999672	-0.00042	-15.1808	-0.62139	2.184254	-39.1869
89	-47.7606	5.443923	1.430034	-0.00214	-14.5809	-1.61243	2.294539	-40.7336
90	-45.0819	1.733726	1.503875	-0.00197	-16.4865	-0.15164	3.229802	-34.9092
91	-43.2214	6.441169	2.685422	-0.01404	-15.5365	-0.58832	2.296592	-38.5057
92	-46.228	4.769802	3.464533	-0.00246	-16.6904	-1.55273	3.608283	-39.8251
93	-51.5835	4.475157	2.113307	-0.00107	-17.831	-1.56541	4.298738	-43.0732
94	-57.6862	3.472822	4.481943	-0.00296	-19.6189	-2.26176	2.970408	-46.7278
95	-53.013	3.122544	3.088602	0	-17.8496	-1.72856	4.507325	-44.1533
96	-56.4226	2.933276	1.786618	-0.00098	-17.1217	-2.19004	1.751291	-43.5811
97	-52.3921	6.260428	1.902834	-0.00303	-16.7204	-1.83465	0.856602	-42.8539
98	-47.5338	5.157673	2.062012	-0.00126	-16.6514	-0.98889	0.14548	-37.2574
99	-46.8812	5.544018	2.574945	-0.00246	-15.5342	-0.72376	0.950559	-39.6904
100	-46.3107	3.003985	2.621132	-0.0003	-14.3472	-1.67766	3.402018	-39.3127
101	-45.331	4.721521	1.399107	-0.0052	-14.8234	-0.53132	3.036138	-39.1279
102	-48.4022	4.611687	3.114782	-0.00022	-16.8538	-0.56318	1.73225	-40.4437
103	-52.0914	1.262014	6.811759	-0.0019	-17.8931	-1.53401	4.142701	-44.8788
104	-50.6623	5.475101	0.324238	-0.00137	-17.2198	-0.393	0.340064	-39.1875
105	-51.6174	5.665266	2.44003	-0.00522	-17.1492	-1.72342	1.746594	-42.5914
106	-51.5192	2.613327	1.689108	-0.00344	-15.9855	-0.89255	2.198075	-41.1382
107	-49.8723	4.414045	1.432277	-0.0009	-16.0533	-1.51796	1.99472	-40.1412
108	-51.0377	1.742451	3.044357	-0.00123	-16.7218	-1.43697	4.475181	-42.1397
109	-49.1068	3.965837	2.180492	-0.00225	-16.4293	-1.17594	3.583036	-41.2287
110	-52.034	6.852609	3.385809	-0.00065	-17.13	-0.95747	0.005701	-44.1901
111	-47.1708	4.664676	2.273885	-0.00316	-16.7885	-1.08246	0.990671	-37.2259
112	-52.2962	3.526408	3.588455	-0.03866	-17.3282	-2.20682	4.12481	-43.9621
113	-55.586	2.811107	1.096934	-0.02058	-16.5009	-2.04194	3.871542	-44.8023
114	-59.5767	1.118856	3.425335	-0.38635	-17.8145	-3.0907	4.027186	-46.8565
115	-59.3136	4.914501	3.312834	-0.00083	-20.5515	-2.18869	2.90244	-47.7023
116	-49.7861	7.590368	0.378315	-0.01612	-17.7972	-1.25376	-0.52216	-38.1654
117	-48.9533	5.035852	3.222552	-0.00054	-16.3843	-1.91684	1.705136	-40.6152
118	-58.6266	4.856679	2.802075	-0.14848	-19.4822	-3.33522	3.631297	-46.9508
119	-49.6268	2.148349	4.390413	-0.00162	-17.9512	-0.74104	4.693151	-42.1649
120	-54.3675	3.38256	2.234369	-0.00491	-17.8772	-1.10504	2.159362	-43.1567
121	-50.5132	3.606139	1.136841	-0.01518	-16.5518	-1.09817	2.037618	-39.6286
122	-51.2304	5.095457	1.599666	-0.00334	-17.5107	-0.72367	2.288552	-41.9763
123	-57.5745	2.65418	2.813489	-0.00172	-19.5775	-4.24589	5.019131	-44.2362
124	-58.9588	5.430727	2.158512	-0.00477	-18.4502	-3.00535	2.015285	-47.103
125	-50.5141	4.229752	2.491265	0	-17.7635	-2.10311	3.776606	-41.1451
126	-51.3729	4.077758	4.792623	-8.55E-05	-17.5257	-1.58852	3.281859	-44.4108
127	-49.4857	5.524024	2.386782	-0.00049	-16.6222	-2.30468	1.621492	-40.0906
128	-47.6407	3.64703	5.50359	-0.00264	-16.6477	-1.29909	2.205384	-41.0473
129	-57.6617	5.723997	0.223854	-0.00804	-19.2045	-3.07834	1.896006	-43.2147
130	-56.5834	6.380634	2.145136	-0.0032	-18.5322	-2.57023	2.349051	-46.3526
131	-43.889	3.369441	5.128676	-0.00048	-16.7888	-0.86759	3.369079	-38.0993
132	-55.8938	3.323501	3.745222	-0.03183	-18.0592	-2.76971	3.376473	-45.4783
133	-52.5581	4.809548	3.494675	-0.00374	-16.5459	-2.68243	4.173127	-45.8033
134	-67.7778	-2.10062	2.505572	-0.36751	-18.626	-2.93324	3.654674	-49.9107

135	-59.456	4.007876	1.04169	-0.01795	-18.1811	-2.67252	0.355203	-43.9892
136	-65.9699	2.191494	3.624556	-0.73057	-17.6735	-3.54331	0.026941	-49.8655
137	-64.3525	4.184096	2.426089	-0.0112	-19.1413	-4.09226	1.511327	-49.2292
138	-56.3902	1.232966	2.407395	-0.30664	-17.4326	-2.33579	4.026593	-43.9821
139	-61.2208	2.413167	2.895846	-0.10286	-18.0755	-2.95789	1.796391	-47.19
140	-58.8623	1.05845	3.116555	-0.22527	-16.3563	-2.88813	3.969705	-47.5373
141	-61.0142	0.035636	6.55122	-0.41028	-18.9126	-2.91306	3.644514	-49.0097
142	-54.942	0.508243	5.080964	-0.32134	-17.2447	-2.2792	3.836471	-44.5224
143	-60.6589	-0.44919	3.055464	-0.45252	-18.0394	-3.66525	5.402002	-46.51
144	-55.8402	0.67576	3.306405	-0.02606	-17.3547	-1.77477	3.305331	-43.9721
145	-57.8923	0.374263	3.849658	-0.35782	-18.4144	-2.47684	2.238358	-43.1056
146	-62.5674	-1.42154	3.148864	-0.00418	-19.7515	-3.11628	3.064678	-44.4874
147	-55.1407	3.908685	1.342462	-0.00589	-17.2717	-2.46016	1.148852	-41.803
148	-56.1191	4.917552	1.621534	-0.003	-17.8137	-1.36302	1.684046	-45.1625
149	-54.5332	2.821464	3.255246	-0.06324	-16.6866	-1.81401	1.947245	-43.9933
150	-59.5071	0.521581	5.52961	-0.49583	-17.703	-3.26527	2.814287	-46.9085
151	-44.8277	3.668578	1.785547	0	-15.1747	-0.92662	4.048483	-38.229
152	-49.0426	-0.25538	0.522429	-0.00021	-15.0837	-1.24352	4.007745	-36.9899
153	-48.3061	2.425153	2.84581	-0.00117	-15.4257	-1.12569	1.115536	-38.14
154	-53.2526	-0.06251	2.606561	-0.00225	-16.6916	-1.14703	2.402918	-40.3587
155	-49.4003	5.225402	1.218437	-0.00203	-16.283	-1.0479	0.924397	-39.4356
156	-48.5885	4.632349	1.087155	-0.00882	-15.4827	-0.72836	1.409869	-39.4979
157	-46.5141	2.440076	1.651873	-0.00071	-15.2692	-0.21119	4.306722	-39.4317
158	-49.64	-2.71554	3.922941	-0.49328	-17.4542	-0.74265	9.435168	-41.5925
159	-48.4513	3.751072	3.263336	-0.00063	-16.2341	-0.45473	1.380888	-40.1571
160	-58.0717	3.392286	1.545444	-0.00217	-17.3965	-2.18959	1.060962	-44.4822
161	-59.1775	3.82684	2.23999	-0.08432	-18.9476	-2.73962	2.894673	-46.3674
162	-60.3825	0.951418	4.357356	-0.0774	-18.7503	-2.64678	3.310827	-47.5276
163	-58.6213	0.807877	3.589797	-0.14137	-17.2703	-2.57007	2.369752	-45.407
164	-61.9444	0.722652	2.700494	-0.37979	-17.2565	-3.00339	2.33291	-47.0608
165	-49.9552	4.680246	2.174749	-0.00092	-17.0811	-1.5644	2.39471	-40.5585
166	-51.9245	-2.96936	3.883386	0	-16.011	-1.84322	4.960496	-39.9448
167	-49.1341	3.787121	2.667959	-0.00253	-14.5392	-1.84912	2.179883	-41.3783
168	-52.6678	-4.50034	3.983743	-0.12893	-18.9362	-1.18405	11.08833	-42.9904
169	-61.6214	-5.07111	2.867532	-0.46006	-20.0552	-1.01719	5.279507	-43.1649
170	-64.3397	-5.35488	4.293078	-0.04549	-21.5455	-2.00095	8.527813	-48.2138
171	-69.0798	0.340678	1.439913	-0.03858	-22.58	-4.44125	3.436022	-47.2365
172	-63.8238	-4.60781	2.708817	-0.06845	-21.3277	-2.04502	8.027736	-46.5114
173	-59.8033	-3.25663	0.830096	-0.43083	-19.3897	-0.87264	4.14594	-40.8295
174	-64.3081	-6.12645	2.274097	-0.52437	-20.7712	-1.09094	5.242882	-43.3122
175	-58.9061	-6.69571	1.97424	-0.46257	-18.8217	-3.13258	6.852616	-38.6204
176	-63.9398	-6.30579	0.858325	-0.5191	-21.0065	-1.88031	7.474293	-42.5607
177	-63.7615	-5.63515	1.86404	-0.51825	-21.7158	-2.19494	5.238698	-40.8001
178	-62.3265	-5.20571	1.893276	-0.57087	-18.7805	-1.57958	2.628419	-40.7115
179	-61.2803	2.216656	6.786055	-0.08274	-23.2515	-1.96477	2.556343	-47.5403
180	-69.2636	-2.72734	4.754395	-0.80563	-23.8142	-3.82945	8.229131	-51.0705
181	-65.3236	-1.72269	2.526545	-0.29584	-22.7671	-2.14336	6.938516	-47.8598
182	-67.9637	-2.15917	2.049445	-0.46046	-23.6011	-2.57756	6.631197	-47.8461
183	-64.8146	-2.14451	3.418977	-0.90392	-21.5012	-2.57128	6.070871	-47.1835
184	-65.6593	-2.80856	1.129147	-0.87662	-20.4947	-2.23001	6.132389	-46.5109
185	-58.0668	0.392758	0.212636	0	-20.6036	-1.25671	6.468895	-43.2808
186	-62.3338	-0.7969	1.49747	0	-20.9945	-1.95943	7.766697	-47.8471
187	-61.5567	-2.53947	2.363805	-0.35193	-20.6858	-1.73115	9.544514	-48.1567
188	-58.8613	-1.33311	1.892262	-0.12614	-21.7086	-2.18906	11.14762	-46.5443
189	-63.5081	0.742242	0.995778	-0.00556	-23.7677	-2.04074	5.427039	-44.8592
190	-63.0082	-2.24334	-0.03149	-0.38456	-22.0631	-2.1352	11.05457	-47.2051
191	-61.8568	1.326527	1.023287	0	-22.3089	-1.66588	5.088121	-45.32
192	-63.8011	0.532802	2.660353	0	-23.308	-2.19144	4.850992	-46.3458
193	-57.9618	2.536667	0.12669	0	-20.6942	-2.09659	5.832758	-43.6672
194	-57.9216	2.919865	2.773273	-0.00139	-21.2608	-2.40221	4.441343	-44.3917
195	-63.7676	3.033846	0.343604	-1.55E-05	-21.9278	-2.24808	4.897697	-47.8669
196	-64.6782	1.889887	2.167672	-3.62E-05	-22.35	-3.01817	4.595873	-47.9634
197	-64.2033	2.320214	2.754144	0	-22.5765	-1.6561	5.056743	-50.1018
198	-61.4436	3.592551	1.297592	-0.00045	-22.2928	-1.77045	4.814666	-47.0848
199	-69.0229	-0.06974	1.351906	-0.01229	-25.438	-3.06882	8.131765	-49.9178
200	-70.0856	0.404395	0.809064	-0.00317	-24.1854	-2.60482	6.102647	-50.6084
201	-63.7491	1.105864	0.792674	0	-23.5404	-2.77073	6.416914	-45.7535
202	-74.4269	0.327633	0.94493	-0.03146	-25.0798	-2.93167	5.319788	-52.9763
203	-69.8616	2.114069	0.786659	-0.10301	-24.1848	-2.19816	5.383882	-51.6603

204	-61.9994	2.355048	1.076434	-0.01796	-22.944	-2.30052	7.961762	-48.1302
205	-68.1933	2.081945	2.439545	-0.08939	-23.9304	-2.49888	5.227479	-51.4236
206	-66.8314	2.797439	2.051755	-0.04646	-24.085	-2.78781	4.393655	-49.155
207	-66.5349	-0.62698	1.931405	-0.03726	-24.0531	-2.76062	4.869441	-45.8579
208	-69.9086	0.969502	0.013923	-0.03297	-24.316	-2.62203	4.260574	-48.1816
209	-67.2706	0.552826	0.174014	-0.00365	-24.2169	-1.7515	7.136325	-49.1617
210	-61.37	2.190174	2.096807	-0.04683	-22.7514	-2.0781	5.463376	-46.244
211	-65.763	3.701473	1.358136	-0.07585	-23.1146	-3.01692	4.945044	-49.5603
212	-67.3363	1.566217	2.113008	-0.00658	-24.664	-2.05684	5.274577	-49.5626
213	-64.9136	1.178796	1.907956	-0.02993	-23.9227	-1.7956	4.498796	-46.7509
214	-67.6185	1.927231	2.75917	-0.00647	-24.7356	-3.22922	5.534499	-49.8681
215	-62.4493	-0.09441	2.797037	-0.08499	-23.4031	-2.53987	8.28813	-47.4121
216	-70.0569	1.76186	2.41396	-0.02528	-24.934	-3.50465	5.30601	-51.0749
217	-64.9604	1.162392	0.403242	-0.00012	-23.7657	-1.82721	7.49854	-48.4316
218	-70.3936	-3.95587	0.5671	-0.82454	-22.5298	-2.44579	8.829562	-50.0343
219	-62.3036	-2.13529	2.394396	-0.28736	-22.6197	-3.07348	7.664868	-44.247
220	-62.9911	-0.10772	2.430118	-0.01335	-22.4939	-3.31294	7.312248	-46.8056
221	-68.4966	-0.0409	1.352027	-0.00522	-23.7618	-2.49538	6.824253	-50.3696
222	-61.1022	-0.21506	2.20909	-0.01407	-21.8029	-2.45106	7.365887	-46.194
223	-64.8074	-2.87532	1.517669	-0.27189	-21.9367	-2.2939	10.20832	-49.1556
224	-60.5769	-1.62333	2.761524	-0.00209	-21.4218	-2.55387	9.42959	-47.1669
225	-65.7288	0.689566	1.456074	-0.00522	-23.7805	-3.2619	7.574168	-48.401
226	-67.1006	-2.93206	3.149297	-0.1217	-23.5361	-2.57434	6.682058	-47.7678
227	-59.6805	0.966504	1.05052	-0.0427	-21.7512	-1.89799	7.278412	-45.284
228	-59.2328	-3.5607	3.779616	-0.13725	-21.6836	-1.92214	5.570426	-41.2792
229	-74.6669	-4.46155	2.079163	-0.72911	-25.7184	-2.3708	9.102381	-52.5686
230	-68.4726	-4.72931	3.182361	-0.80041	-21.7041	-2.83696	7.900783	-49.485
231	-73.4402	-2.94614	2.830035	-0.85208	-25.1392	-3.48674	7.269833	-51.1159
232	-71.1686	-4.41186	2.136146	-0.65963	-23.464	-3.03466	10.16542	-51.9
233	-72.6851	-4.17767	4.202277	-0.61799	-23.6064	-2.88088	8.091372	-53.6958
234	-74.2817	-4.5245	1.153152	-0.66223	-24.5529	-2.9688	8.024531	-50.7509
235	-62.7685	-1.4028	1.749409	-0.04403	-21.8234	-2.32925	7.407874	-46.3263
236	-58.0425	-2.65816	3.617392	-0.15063	-21.5879	-1.82021	8.932397	-44.3755
237	-66.3548	-2.30608	1.245727	-0.45149	-22.4431	-2.07363	8.011605	-48.3378
238	-70.3562	-2.45799	2.049813	-0.64767	-23.8298	-2.67297	7.92576	-50.7234
239	-65.1009	-2.61005	2.613154	-0.98012	-22.5049	-3.68157	8.710044	-46.6475
240	-59.7243	0.480951	2.466831	-0.01612	-21.7175	-1.752	3.986614	-43.173
241	-75.804	0.135691	1.037805	-0.00487	-26.7949	-3.19123	7.674349	-54.6608
242	-61.0659	1.122133	0.408505	-0.00238	-23.1901	-2.01813	8.722287	-46.1082
243	-61.5567	-1.55612	2.177237	-0.0606	-23.1512	-2.3592	9.622016	-46.2289
244	-68.8762	-0.67761	1.253379	-0.01054	-24.4291	-2.4746	5.464393	-48.0021
245	-56.4427	-1.59984	1.977758	-0.00307	-20.4878	-2.02766	7.358945	-41.6611
246	-65.4533	-1.2813	2.004558	-0.02706	-22.5922	-2.01477	6.515345	-48.0579
247	-70.4961	0.546784	3.25217	-0.00245	-24.9157	-3.2038	6.128738	-52.3019
248	-69.5637	-0.07411	1.936577	-0.00568	-24.0417	-2.99848	5.509134	-49.8895
249	-58.4862	4.134547	1.397194	-0.00027	-22.1548	-2.09499	7.285973	-47.0539
250	-65.8725	2.973816	1.969385	0	-23.3654	-2.88166	7.607788	-52.1765
251	-60.1945	0.805302	2.616135	0	-21.6908	-2.33365	8.399473	-47.991
252	-67.668	-0.32015	1.307997	-0.00363	-24.0913	-2.64981	7.581902	-49.493
253	-66.1636	0.257683	2.64954	-0.00352	-24.2764	-2.85215	5.718461	-47.6571
254	-66.2191	-0.50538	1.535873	-0.0013	-23.8609	-2.15297	9.802521	-51.037
255	-72.2755	0.844251	1.901247	-0.00585	-24.9055	-2.91725	6.972014	-54.1644
256	-65.3389	-0.98071	1.781448	-0.01171	-23.35	-2.45393	9.917006	-50.2409
257	-72.5395	-4.48407	1.332477	-0.27091	-23.9111	-2.58542	9.410225	-52.0307
258	-65.754	-1.94921	1.923327	-0.01665	-23.0965	-3.00205	8.552553	-48.1654
259	-64.4878	2.652091	3.708366	-0.02357	-23.5951	-3.52915	5.587325	-49.2878
260	-64.33	-1.4434	0.261576	-0.00859	-23.1617	-1.72833	9.416723	-47.6663
261	-65.0526	-0.85747	1.091723	-0.0148	-23.0252	-2.47274	8.900757	-48.6748
262	-62.8736	-0.67086	2.832572	-0.00276	-22.9629	-2.88308	7.379859	-46.5665
263	-66.5284	-0.10705	0.435818	-0.00427	-23.9324	-2.77455	8.338052	-48.484
264	-69.1609	-1.71626	3.975538	-0.00315	-25.2189	-2.67442	9.785271	-53.309
265	-65.5677	-0.48935	2.301054	-0.00149	-23.1652	-3.0454	7.417304	-48.5846
266	-65.2152	0.250266	1.87531	-0.06471	-22.242	-2.83463	6.787146	-48.9866
267	-60.1709	2.950419	3.079398	0	-22.1337	-2.72679	8.308658	-49.6489
268	-57.6399	3.619973	1.900215	-0.00013	-21.2019	-2.80936	5.89607	-45.0447
269	-59.9081	2.577929	1.85545	-2.08E-05	-21.9397	-1.68965	4.574744	-45.2868
270	-63.886	2.742967	3.406509	-0.00027	-23.1253	-3.21393	6.052785	-49.7488
271	-55.2878	-1.09513	0.856484	-0.01259	-20.2763	-1.31631	7.466901	-40.9109
272	-59.1149	3.136945	2.957393	-0.0036	-21.5367	-1.25069	6.973048	-49.3913

273	-66.1396	1.936394	3.297598	-0.00423	-24.0022	-2.06341	4.149571	-49.4533
274	-72.9971	-2.95639	2.423726	-0.55745	-24.365	-2.64893	8.154818	-53.0479
275	-71.4136	0.384118	2.709579	-0.69808	-25.3198	-2.86419	6.80196	-52.4271
276	-66.7422	-1.4517	2.547616	-0.55175	-22.5155	-2.1025	8.556048	-51.2244
277	-73.6042	-3.45453	2.182321	-0.51258	-26.1091	-1.14879	6.703966	-51.2654
278	-65.4333	-3.55182	0.950791	-0.57014	-20.6981	-0.19946	6.331283	-47.6959
279	-72.9483	-0.0488	0.693119	-0.4925	-24.2936	-1.73001	6.964493	-54.041
280	-75.3357	1.070691	0.40468	-0.51463	-25.8771	-1.42609	4.592449	-53.5858
281	-67.6126	-0.2224	0.650214	-0.39721	-22.6235	-1.84175	5.552488	-48.7305
282	-69.9861	-3.25997	2.065477	-0.52766	-23.0954	-1.03977	8.588789	-52.7176
283	-71.1765	-2.35079	0.792012	-0.532	-23.7827	-0.96917	6.480971	-50.8149
284	-67.2006	-3.82524	1.505643	-0.54017	-21.2367	-0.43821	6.114722	-48.7807
285	-76.2331	-2.07622	0.265628	-0.50573	-24.7363	-0.92277	5.360053	-53.6178
286	-72.8202	-0.37812	1.739972	-0.51494	-25.7482	-0.71187	5.667555	-52.8746
287	-70.5191	-2.92253	0.425504	-0.54082	-22.7237	-0.62301	8.121703	-52.2562
288	-72.153	-4.52357	1.462848	-1.08107	-22.6732	-1.97051	7.012069	-50.3795
289	-75.3953	-0.15049	0.911738	-0.39114	-25.1771	-1.58252	5.385467	-54.3912
290	-61.4108	0.804825	-0.77839	-0.43168	-21.3354	-0.41651	6.941994	-46.1956
291	-55.5063	3.722365	-0.06292	-0.08132	-20.6698	-1.66949	7.220193	-43.9653
292	-63.9144	-1.77451	0.13551	-0.51732	-20.29	-2.54881	6.23436	-45.1536
293	-77.2193	-7.42815	0.954374	-0.55698	-24.6408	-0.88358	10.32713	-54.9913
294	-79.4243	-4.36223	0.171073	-0.97255	-23.9101	-1.40307	8.087081	-57.0345
295	-71.0391	0.790031	1.481417	-0.59791	-24.7049	-2.34416	5.052936	-50.7165
296	-67.2273	-0.41687	1.871778	-0.46692	-24.4377	-0.87431	5.715791	-48.619
297	-68.4583	-3.95285	0.716631	-0.5211	-21.945	-0.91645	7.824654	-49.6642
298	-62.4836	-5.38206	1.06678	-0.53396	-20.0714	-0.42699	7.067789	-44.2038
299	-62.4793	-3.55561	1.062282	-0.44292	-20.2658	-0.48739	6.44763	-45.2375
300	-56.0639	-1.06098	4.06217	-0.39882	-19.9628	-1.16113	7.279757	-44.8221
301	-67.2586	-4.01732	3.297244	-0.52411	-23.4096	-1.73396	8.089793	-48.9606
302	-67.4271	-6.01789	3.556189	-0.51786	-22.6249	-0.9702	9.165426	-50.0179
303	-60.9865	-1.82459	3.252271	-0.38245	-20.8729	-1.27364	7.435226	-47.3204
304	-72.7489	-3.75914	2.713173	-0.44516	-24.309	-0.99855	8.786113	-54.7363
305	-68.373	-2.80047	2.851751	-0.53861	-24.6801	-0.62069	8.054072	-50.6389
306	-74.3295	-3.08694	3.098237	-0.50188	-25.3291	-1.15619	10.18466	-57.5383
307	-69.8391	-6.49937	3.769111	-0.5121	-24.2811	-1.13157	6.399755	-47.5837
308	-66.6869	-5.11524	2.698963	-0.46895	-24.1107	-0.62881	9.968385	-49.0305
309	-67.6335	-3.33656	2.980715	-0.50607	-22.9924	-0.52896	6.978903	-50.2291
310	-67.3606	-5.67006	3.039982	-0.51047	-22.1904	-0.7407	9.191482	-50.4805
311	-68.5904	-5.52389	2.122036	-0.54111	-22.8651	-0.84207	8.966435	-49.9067
312	-61.4933	-2.56942	1.73427	-0.38224	-20.8017	-0.66018	7.615837	-46.4298
313	-64.22	-4.80776	2.478526	-0.51156	-21.5295	-0.74839	9.349334	-48.4507
314	-64.3162	-6.13745	5.756786	-0.53638	-21.6586	-0.5633	7.105294	-48.2826
315	-71.7224	-5.34789	2.553666	-0.51126	-24.4645	-0.97524	10.62612	-53.6032
316	-73.551	-3.93677	2.303709	-0.50818	-24.0981	-0.83552	7.994471	-54.4706
317	-77.2187	-5.24152	1.955263	-0.55635	-24.6716	-1.57954	9.169185	-56.2942
318	-73.523	-6.51661	3.383443	-0.5207	-23.6818	-1.54037	8.990245	-53.6373
319	-65.7274	-3.96019	2.097258	-0.5229	-21.8918	-0.89902	7.780979	-48.3317
320	-68.3418	-5.48291	4.147582	-0.54329	-23.208	-0.7755	7.19249	-49.6722
321	-62.9096	-3.20483	3.061094	-0.51757	-21.3555	-0.79046	5.401315	-45.5036
322	-67.2404	-1.07747	3.442834	-0.45219	-23.4674	-1.02603	9.032694	-53.6929
323	-66.5066	-2.21461	3.255256	-0.53141	-22.2745	-0.69209	7.411035	-51.4603
324	-70.8654	-4.39608	3.510484	-0.52187	-23.5704	-0.88737	7.547297	-52.5475
325	-64.1673	-3.86378	4.257651	-0.53869	-22.8041	-0.78886	7.797644	-48.2272
326	-60.9769	-5.21249	5.074303	-0.67572	-22.1522	-0.97126	9.112537	-46.1521
327	-57.604	-3.07592	5.150117	-0.53594	-20.7301	-0.72006	8.099627	-45.7917
328	-65.0097	-2.49311	2.761675	-0.23767	-22.3827	-1.52531	8.644939	-49.7776
329	-68.1129	-10.3839	4.142995	-0.59419	-21.4304	-1.16147	10.66152	-49.3474
330	-71.8663	-4.73991	2.638113	-0.56711	-23.371	-1.17057	9.113579	-53.7694
331	-66.7689	-6.39745	2.440199	-0.53025	-22.3229	-0.33874	10.18306	-49.8028
332	-61.7177	-3.8207	3.821565	-0.37791	-21.4003	-0.62689	7.158217	-46.4717
333	-57.7302	-4.01791	2.298609	-0.17796	-20.2853	-0.94003	8.868782	-43.4764
334	-60.9537	-4.62333	3.738128	-0.22655	-21.5942	-0.78577	7.562901	-45.0248
335	-65.9307	-4.43928	2.338126	-0.49712	-21.9157	-0.41809	6.01135	-47.01
336	-64.3438	-1.91145	2.422939	-0.31652	-20.3591	-0.8614	5.241803	-48.56
337	-66.7586	-2.98201	1.745094	-0.5315	-21.5935	-0.66615	5.4242	-48.1547
338	-62.8847	-4.95172	2.233309	-0.53335	-20.3539	-0.38639	8.313932	-47.2066
339	-64.838	-1.88805	2.608427	-0.46746	-22.4495	-0.23147	6.734633	-49.1446
340	-63.1245	-5.71876	3.07288	-0.47345	-20.328	-0.80839	8.668639	-47.5374
341	-73.5363	-5.85033	2.635674	-0.55603	-22.6505	-1.42039	7.93665	-53.6314

342	-68.0669	-10.0565	4.046046	-0.53581	-22.146	-1.02394	9.81652	-48.1671
343	-65.9678	-2.68021	2.20528	-0.48489	-21.5985	-0.90237	6.990722	-49.4979
344	-60.9722	-4.67066	2.386007	-0.48761	-21.055	-0.62031	10.08261	-46.6072
345	-66.9813	-4.88132	2.601323	-0.48724	-23.5331	-1.22546	9.691732	-49.1472
346	-70.4667	-7.09068	4.339793	-0.4933	-23.8577	-0.70987	9.745985	-52.401
347	-75.0706	-6.0596	1.595535	-0.58217	-24.0588	-1.05743	8.095054	-53.0032
348	-68.1597	-6.76703	3.435951	-0.52652	-22.4228	-0.88238	8.220581	-49.2175
349	-71.3291	-4.78265	3.231572	-0.50324	-23.8154	-0.76455	9.065079	-53.7599
350	-60.9008	-2.33731	4.526073	-0.47882	-22.9337	-1.10198	9.455599	-48.0306
351	-59.5102	-2.8864	1.968804	-0.50049	-19.5771	-0.5544	6.855705	-44.8163
352	-63.5765	-7.27391	4.429291	-0.51835	-20.8515	-0.4077	10.19456	-49.1489
353	-69.8708	-4.08044	3.299562	-0.52187	-22.4983	-0.9804	9.202039	-54.2914
354	-66.5082	-6.22888	2.983452	-0.52587	-22.6727	-0.85232	7.626446	-46.8383
355	-62.8054	-5.15041	3.608738	-0.3402	-21.264	-1.15885	9.226429	-47.7271
356	-66.3929	-5.80649	5.585086	-0.37172	-23.0439	-1.03129	8.828059	-50.5526
357	-69.2601	-6.44931	2.95677	-0.54407	-22.5643	-1.40463	8.345278	-49.5998
358	-63.7192	-1.03277	2.536237	-0.01112	-22.1583	-0.83659	6.381661	-48.5983
359	-65.5313	-7.49721	4.487171	-0.44075	-22.6355	-0.85381	9.601071	-48.1923
360	-64.3038	-3.52946	3.633012	-0.53463	-22.1889	-0.4801	7.974639	-49.1784
361	-70.7084	-8.24007	4.438344	-0.53453	-23.293	-0.70194	9.60779	-51.9849
362	-68.4041	-6.94553	3.995397	-0.52921	-22.7444	-0.78233	10.81098	-52.2089
363	-69.6241	-3.41364	3.292806	-0.53553	-22.5767	-1.37597	8.109486	-53.1245
364	-69.7933	-5.98888	4.045945	-0.52158	-22.8775	-0.46118	8.815537	-52.8056
365	-65.9575	-3.60241	4.595936	-0.53717	-22.7496	-0.6755	6.937867	-49.9266
366	-65.7323	-3.42438	2.348485	-0.42203	-21.7707	-1.27354	7.873626	-49.0638
367	-69.1441	-7.3237	2.634124	-0.54506	-23.4558	-0.70389	10.4763	-50.2261
368	-69.3865	-6.83992	2.815093	-0.49714	-22.4111	-1.44726	11.30676	-52.3129
369	-66.8676	-7.74499	3.790447	-0.52449	-22.2889	-0.41398	11.14036	-50.826
370	-70.852	-4.63271	3.286846	-0.51913	-22.3676	-0.80835	7.31525	-53.1263
371	-66.9835	-2.76578	2.351923	-0.53247	-23.0422	-0.6916	7.558994	-49.8624
372	-62.937	-5.33522	3.204349	-0.54322	-21.114	-0.72331	9.184857	-47.6105
373	-67.3351	-5.52276	2.65851	-0.49535	-22.9084	-0.6752	9.104938	-49.4968
374	-62.7548	-2.09582	4.585353	-0.28454	-21.7391	-1.18693	6.625281	-48.6591
375	-63.9805	-3.01621	3.332917	-0.49921	-21.6542	-0.78673	7.818605	-49.1757
376	-66.8021	-5.25917	3.714837	-0.48329	-21.31	-0.82187	9.3405	-51.9832
377	-71.0106	-5.70349	3.618052	-0.59379	-23.1013	-0.94037	8.537027	-52.8267
378	-66.0309	-7.11469	3.226507	-0.50884	-21.1982	-0.61107	11.4184	-51.243
379	-71.0692	-7.36228	5.557349	-0.53255	-24.5111	-0.521	7.387282	-51.0869
380	-71.0096	-3.13189	2.873577	-0.48653	-23.1049	-0.7016	7.41479	-53.8731
381	-68.6522	-5.3784	3.160321	-0.53177	-22.7608	-0.50019	10.06914	-52.7105
382	-64.3602	-4.8005	4.657911	-0.49715	-23.4504	-0.67831	10.29537	-49.8871
383	-70.1079	-4.05525	4.410879	-0.4251	-24.5099	-1.11443	10.34461	-54.7587
384	-65.4298	-3.06586	3.318836	-0.33322	-22.8085	-0.58247	9.365036	-51.3237
385	-73.4437	-4.6625	3.723096	-0.48781	-25.431	-0.77878	8.752652	-54.5593
386	-73.7284	-6.9773	2.364858	-0.53339	-23.5277	-0.80996	10.93465	-55.1795
387	-72.2417	-6.04717	2.25775	-0.46873	-23.768	-0.90566	9.56536	-52.8752
388	-69.8178	-4.66529	1.976966	-0.50005	-23.2261	-0.60651	7.263335	-50.0601
389	-72.1443	-2.62117	3.272687	-0.40807	-24.8378	-0.78454	7.722903	-54.4883
390	-73.1083	-5.77092	4.145275	-0.52493	-23.5338	-0.53671	7.629961	-54.5171
391	-72.9416	-5.64046	5.435356	-0.49188	-25.3507	-1.28154	10.38884	-56.0013
392	-71.5362	-4.9411	4.055692	-0.50584	-22.8345	-1.75	8.381585	-53.9419
393	-65.5505	-5.19005	3.421348	-0.49145	-22.3279	-0.40563	8.27199	-48.8288
394	-70.9427	-7.48644	3.91021	-0.53037	-23.6037	-0.7643	10.00255	-52.4707
395	-68.2838	-6.11648	3.698028	-0.50374	-23.685	-0.48999	9.253296	-50.44
396	-65.7669	-3.84219	2.128013	-0.5617	-21.927	-0.49398	11.10395	-52.174
397	-65.5281	-9.01786	4.616344	-1.09797	-22.61	-0.56292	14.45974	-51.3154
398	-64.7256	-0.14409	3.500069	-0.31457	-23.3945	-1.0869	7.248832	-50.5345
399	-69.2571	-4.44949	3.689364	-0.4698	-24.2493	-1.34807	8.614968	-51.0448
400	-64.2558	-1.11955	0.974617	-0.47144	-22.1847	-1.37426	4.380262	-44.4608
401	-67.4723	-4.8236	2.88442	-0.52646	-21.8881	-0.92276	6.836477	-49.0322
402	-65.6541	-4.70913	3.556902	-0.52533	-20.8976	-1.17082	7.476468	-49.3846
403	-66.7844	-3.63937	2.393418	-0.54347	-22.1333	-0.60593	7.66275	-49.9185
404	-67.6649	-3.45942	3.39049	-0.38267	-23.2263	-0.52919	7.797718	-51.2555
405	-74.8824	-7.06641	4.4486	-0.54313	-24.6597	-0.93536	6.064916	-52.1913
406	-63.1919	-4.43836	2.136428	-0.31036	-22.0096	-0.57855	8.649005	-46.6405
407	-69.1223	-3.92535	3.594404	-0.4717	-22.982	-0.80355	7.890036	-52.4241
408	-71.4415	-2.52206	3.865551	-0.47002	-24.2886	-0.78911	6.436128	-53.6734
409	-62.7772	-3.55858	5.163285	-0.54949	-22.1728	-0.77773	10.23203	-51.1138
410	-66.856	-4.44006	4.564987	-0.52798	-22.8263	-0.5594	9.955505	-53.0228

411	-58.6121	-3.48357	3.95722	-0.26689	-21.5782	-0.6831	7.578324	-44.1359
412	-64.2809	-2.60996	0.168465	-0.44858	-21.2723	-0.55397	6.711514	-46.2761
413	-64.9543	-2.66187	0.66019	-0.53577	-21.2247	-1.15349	8.650771	-48.6893
414	-61.6824	-3.33558	3.001357	-0.46055	-20.4333	-0.58337	8.963585	-48.8346
415	-59.0886	-5.1166	2.106375	-0.51646	-19.9255	-0.4768	8.720495	-43.8802
416	-65.5147	-5.23316	2.794912	-0.53849	-20.9422	-1.33196	8.218103	-48.4819
417	-65.8587	-4.80155	2.96757	-0.27378	-22.6717	-0.47975	8.822984	-49.4224
418	-66.3619	-5.73919	3.165289	-0.63051	-20.4955	-1.59903	9.593709	-50.6567
419	-66.8262	-4.1131	1.351628	-0.4688	-21.3483	-0.63935	7.554835	-49.1631
420	-68.8849	-5.41207	4.44983	-0.51028	-23.6042	-0.8234	7.55329	-50.5381
421	-68.4948	-6.75472	1.173423	-0.52962	-22.5471	-1.24992	8.336817	-46.9237
422	-51.625	-1.19368	3.278931	-0.51171	-19.4832	-0.70096	5.748575	-38.763
423	-58.9647	1.234281	3.846206	-0.20146	-21.1876	-1.69904	6.275527	-47.2326
424	-68.2731	1.154189	0.296895	-0.13821	-22.2129	-1.44651	5.151587	-51.0781
425	-62.5275	1.296848	2.874731	-0.02672	-22.7162	-1.35743	6.801039	-49.3998
426	-69.6515	0.99686	0.233167	-0.52309	-22.5282	-1.09101	4.243132	-50.9823
427	-64.6218	4.076426	0.471201	-0.43165	-23.1604	-1.77049	5.934422	-49.7413
428	-71.9674	1.448559	1.444921	-0.4596	-24.7089	-0.6435	4.536383	-53.5853
429	-67.9233	-1.05582	-0.36065	-0.52726	-21.7979	-0.72775	5.306198	-48.7601
430	-66.3622	-0.85306	-0.15551	-0.50977	-21.9023	-1.86234	6.4062	-47.4854
431	-70.6626	1.780713	0.64275	-0.18905	-24.4873	-1.62035	5.655275	-52.4446
432	-76.4948	2.292227	0.147424	-0.2467	-26.0023	-1.15958	5.151123	-56.677
433	-73.6482	-0.62871	-0.16356	-0.52219	-24.4572	-1.17086	6.020248	-52.7259
434	-77.2043	-1.10551	1.729019	-0.50744	-25.6777	-0.99072	6.780815	-57.4328
435	-72.033	0.575432	-0.02731	-0.50416	-24.0902	-0.81489	6.175964	-53.3478
436	-80.3033	1.195122	0.040243	-0.53158	-26.0572	-1.63218	3.374446	-56.6922
437	-71.2813	1.369492	0.124294	-0.52875	-24.2555	-0.78751	4.039156	-51.2424
438	-76.9938	-4.67178	0.347803	-0.7642	-23.8521	-0.7631	7.638891	-54.9293
439	-74.838	-3.29295	-0.04588	-0.56106	-23.258	-1.61209	5.505503	-51.5736
440	-81.0139	-0.12425	-0.6643	-0.86449	-25.9203	-2.33813	4.117124	-55.2195
441	-69.166	3.204741	1.847081	-0.19834	-23.8867	-1.38904	4.360261	-53.104
442	-76.1991	-0.78623	-0.10618	-0.78585	-23.659	-1.14218	5.140064	-54.8597
443	-69.4654	2.150494	0.300861	-0.12796	-22.7683	-1.44191	5.109379	-52.6879
444	-71.411	1.78046	0.708974	-0.35827	-24.6783	-1.08733	4.432616	-52.2092
445	-74.5265	-0.78011	0.763328	-0.73957	-22.814	-1.06353	4.446313	-54.339
446	-65.5272	5.271228	0.844488	-0.01717	-23.407	-1.34053	5.342019	-52.2202
447	-63.5159	5.008601	2.896501	-0.01402	-22.6458	-2.27194	4.260937	-50.7502
448	-60.8586	-2.88503	1.038445	-0.47855	-20.2366	-0.6073	8.710974	-46.4006
449	-63.7095	-3.09594	0.63219	-0.70305	-20.1879	-1.95785	7.530122	-45.9271
450	-69.0577	2.357482	-0.48758	-0.20007	-22.7114	-2.01455	5.067929	-51.0695
451	-69.4679	-2.44683	0.436633	-0.34503	-23.0525	-1.76358	7.810711	-50.1073
452	-65.105	1.491952	2.133475	-0.46385	-22.0376	-2.733	7.378573	-50.8745
453	-67.9273	-0.09878	0.453139	-0.49676	-22.3131	-1.59585	7.256836	-51.1328
454	-64.7519	1.182443	1.770276	0	-22.8754	-2.28348	6.256485	-48.8022
455	-62.4253	3.605577	3.017108	-0.02352	-23.2415	-3.8997	5.27808	-47.1613
456	-66.7022	-3.5673	1.524583	-0.53051	-21.6618	-0.52691	5.15144	-47.0917
457	-67.5396	-3.47565	0.948229	-0.52865	-20.368	-1.15726	4.342543	-47.3009
458	-70.4595	-4.28381	1.329474	-1.08646	-21.5624	-1.3428	7.53494	-51.0484
459	-68.8991	-1.48743	-0.81739	-0.29738	-22.0906	-0.6761	5.724798	-49.2549
460	-61.064	-1.83765	0.538778	-0.53423	-20.8292	-0.74806	5.520141	-43.1738
461	-64.0123	0.779857	0.2247	-0.46193	-21.0519	-1.43507	5.115575	-47.1836
462	-64.9975	1.226491	-0.58748	-0.37797	-20.5446	-0.98024	4.696869	-48.4306
463	-67.3452	-1.01557	-0.76272	-0.48918	-20.7193	-0.77365	4.502716	-48.0875
464	-70.5659	-2.92402	1.138439	-0.45211	-22.8697	-0.13354	5.412733	-50.7378
465	-67.8216	4.357221	0.526439	-0.06519	-23.3042	-1.73933	4.890551	-52.4872
466	-70.4801	-1.22676	-0.57508	-0.4972	-23.0272	-1.53504	5.336797	-48.9556
467	-74.3373	7.37594	0.53122	-0.00264	-27.217	-1.71547	4.545093	-57.8545
468	-70.4124	4.227041	0.365275	-0.01438	-24.6427	-2.24245	7.712662	-55.8179
469	-63.381	5.389844	1.049028	0	-21.4666	-1.20926	3.948409	-51.0925
470	-66.4134	2.05658	-0.58834	-0.16365	-22.3071	-1.71552	6.383203	-50.0786
471	-81.114	-1.85849	0.086708	-0.51581	-25.641	-1.82332	5.715464	-57.0775
472	-75.1135	-3.82445	2.782409	-0.65344	-23.4907	-1.782	7.106703	-55.252
473	-64.009	3.06106	1.383844	-0.0097	-22.7685	-1.89778	3.965158	-47.7431
474	-74.8905	-1.63859	-0.22673	-0.54293	-23.8379	-1.4552	6.026665	-53.2158
475	-71.0804	1.218064	0.263676	-0.38789	-24.9841	-1.89586	6.382485	-51.6767
476	-67.2852	4.989097	1.271186	-0.20745	-24.8424	-1.53795	6.428594	-53.3863
477	-65.2192	1.645548	1.053493	-0.33396	-22.9952	-1.33568	5.929457	-49.1829
478	-78.1265	-1.34915	1.375777	-0.46265	-26.458	-1.44653	7.339108	-57.1251
479	-73.5646	-0.21549	-0.15902	-0.48244	-24.2383	-1.07756	6.457127	-53.8489

480	-71.9835	-1.39141	1.766298	-0.51859	-24.1285	-1.2044	7.736598	-54.2436
481	-70.9553	-1.09882	-0.69976	-0.47559	-23.8825	-0.38349	6.634597	-51.0498
482	-75.666	0.729764	0.099307	-0.54571	-24.7493	-1.21278	4.607259	-54.5946
483	-64.4263	-2.88867	2.590148	-0.52165	-21.7512	-1.06371	6.309654	-47.1009
484	-65.4439	3.311958	0.048146	-0.26591	-21.9673	-1.28972	4.541002	-49.8221
485	-65.5861	-2.65741	-0.6988	-0.47742	-22.1001	-0.86696	6.960142	-45.7456
486	-67.1279	-0.91369	0.961745	-0.48122	-22.2204	-1.79723	5.499395	-48.1766
487	-62.5094	-3.34735	1.083553	-0.46267	-21.7318	-0.61567	8.315057	-45.7505
488	-68.4893	-1.17702	1.515198	-0.48124	-22.9144	-1.31829	4.015074	-48.1286
489	-60.8069	3.892672	1.338127	-0.00038	-21.8735	-1.84972	5.828716	-48.1428
490	-61.2928	3.382478	1.899574	0	-21.8582	-2.29796	5.46112	-47.8798
491	-66.0308	0.184007	2.292643	-0.03373	-24.4423	-1.94624	7.323042	-49.4081
492	-58.3154	0.516093	2.004835	-0.01055	-20.7707	-1.9794	5.920583	-43.9963
493	-61.3951	-1.99534	3.368097	-0.17946	-21.9564	-1.86485	5.827622	-44.5947
494	-61.3354	-2.4734	3.06245	-0.01831	-22.2447	-1.91986	7.161316	-44.9029
495	-60.1356	-0.80909	0.821121	-0.03189	-22.5749	-2.02875	6.574486	-42.0866
496	-55.5555	0.655465	2.616549	-0.0039	-20.1473	-2.20863	2.670558	-39.1382
497	-58.9548	-1.26792	1.552353	-0.00749	-21.9909	-2.43191	7.918277	-42.7272
498	-54.3873	-3.50059	4.024283	-0.10058	-19.1603	-1.8054	9.054575	-42.8993
499	-57.8846	1.622318	1.157187	-0.01127	-21.416	-2.01622	5.923873	-43.1446
500	-54.9317	2.214408	1.877162	-0.02621	-19.149	-1.89339	2.453574	-40.4083
501	-53.6813	1.646003	2.144403	-0.07122	-19.3117	-2.76445	7.219337	-42.5437
502	-57.9882	-1.00443	0.569451	-0.08365	-21.4743	-1.86177	6.83183	-40.9654
503	-55.1297	0.264079	2.464719	-0.00225	-20.6116	-1.98196	2.418648	-37.6813
504	-61.5195	-0.10106	0.959334	-0.03234	-22.7835	-2.35996	4.813261	-42.0153
505	-63.2553	0.105729	2.294592	-0.01422	-22.7191	-3.64389	5.120979	-44.3994
506	-66.83	0.846191	1.669368	-0.03203	-23.0898	-3.1967	5.994239	-49.0212
507	-63.2743	-0.06401	1.557189	-0.05925	-21.4147	-2.37774	4.859706	-45.7755
508	-49.4813	2.351033	2.453201	-0.01254	-18.2606	-1.76626	2.375804	-36.6219
509	-52.3613	0.457813	1.513913	-0.06764	-19.455	-2.02421	5.998564	-38.7848
510	-55.4108	3.094038	0.443671	-0.00037	-21.4717	-1.64908	5.87908	-41.7065
511	-49.9215	2.312999	2.710521	0	-20.2005	-1.91875	5.990499	-38.8163
512	-63.7384	2.036371	1.083639	-0.01039	-23.3348	-2.04506	5.340296	-46.8085
513	-58.2828	-2.05602	2.434381	-0.09951	-21.8461	-1.90499	8.482982	-43.2935
514	-60.1535	0.134444	3.42402	-0.03269	-22.3761	-2.17506	4.970748	-44.0989
515	-52.4001	1.345473	4.678462	-0.06146	-20.1472	-2.06802	8.958656	-45.106
516	-59.9448	0.596858	1.838669	-0.02569	-22.5221	-1.80007	5.447415	-43.4799
517	-61.2711	1.122031	0.496591	-0.01759	-22.2658	-2.01767	6.753703	-45.3423
518	-63.2314	-1.21157	1.714507	-0.0224	-23.3099	-2.26519	7.287924	-45.4248
519	-59.345	-0.05457	2.727115	-0.02344	-22.5755	-2.50562	6.600186	-43.5131
520	-57.6725	1.78447	1.446126	-0.00471	-22.5404	-2.22666	6.870764	-43.002
521	-63.0947	1.650171	0.537079	-0.0116	-23.3081	-2.5774	7.207775	-46.5926
522	-55.9113	0.353275	2.721224	-0.02031	-20.4005	-2.44049	6.970144	-43.0946
523	-60.9125	0.12231	3.88113	-0.04182	-23.1073	-2.35849	5.628876	-45.0372
524	-57.7281	1.899639	2.141346	-0.00047	-21.0556	-2.49025	6.033065	-44.2559
525	-58.0506	1.697928	2.745333	-0.00381	-22.0026	-3.22688	2.602177	-39.8628
526	-53.1439	0.433953	1.197577	-0.01943	-20.1013	-1.83379	7.180521	-40.0014
527	-58.663	3.854861	1.408823	-0.00407	-21.1794	-2.38328	4.944276	-45.3042
528	-57.9717	1.341909	1.714853	-0.01459	-21.3247	-1.76864	4.582293	-42.5028
529	-65.628	2.046088	1.434529	-0.04892	-24.3501	-2.27882	4.11051	-46.5412
530	-59.794	2.428582	1.486148	0	-22.4923	-3.37674	5.043377	-42.8831
531	-54.025	0.276058	1.040093	0	-20.3559	-2.10794	7.393285	-40.2707
532	-57.2934	3.373116	0.648216	-0.00268	-21.636	-1.87299	5.820814	-43.6239
533	-58.3735	3.417524	1.538978	-0.00051	-22.0776	-2.272	5.282836	-44.2627
534	-62.0659	2.7156	0.761059	-0.07014	-22.5104	-2.01433	5.823928	-46.7716
535	-53.0629	5.30307	2.153778	-0.00646	-20.4593	-1.84969	4.940309	-43.1446
536	-60.1166	3.59493	1.512068	-0.00064	-22.4519	-2.6985	4.912746	-44.9853
537	-60.3687	3.142127	1.237732	-0.00039	-22.3187	-2.7856	5.318115	-44.9619
538	-57.8135	2.713874	2.992146	-0.01163	-22.7646	-3.74035	4.57956	-41.5825
539	-59.4536	2.820337	2.646659	-0.00804	-20.8629	-2.71702	5.314863	-46.6474
540	-59.4419	0.618328	3.167836	-0.00425	-21.6172	-2.02466	3.071849	-42.6537
541	-56.1599	0.013738	2.270467	-0.00203	-20.0678	-2.10156	3.463368	-39.7361
542	-58.1156	1.053094	3.063457	-0.00976	-21.2253	-3.28194	7.859007	-45.5741
543	-62.2606	0.164972	1.998164	-0.01567	-22.3713	-1.87605	5.168308	-45.3291
544	-56.6495	2.861753	0.469434	-0.01139	-20.9335	-2.4944	5.926063	-42.4675
545	-59.5039	0.662081	2.521184	-0.02118	-21.258	-3.18422	4.094341	-42.3181
546	-61.7474	0.28946	3.469291	-0.01259	-22.6774	-2.40313	3.953697	-44.3668
547	-64.5577	-0.04229	1.608938	-0.0597	-23.2455	-2.6298	3.163673	-43.353
548	-51.9216	3.684396	3.454233	-0.00077	-19.8624	-1.83823	2.599044	-39.9578

549	-60.4398	-1.88401	1.855859	-0.71909	-21.9873	-2.2972	10.36135	-45.7694
550	-60.0336	-0.85118	2.02419	-0.01164	-21.2024	-2.78021	6.62541	-43.8378
551	-62.9078	-5.76155	1.715175	-0.05036	-22.1242	-2.23278	10.92347	-45.3775
552	-58.2158	-2.09137	1.435896	-0.08429	-20.7993	-3.05572	10.74885	-44.3699
553	-62.077	-5.87517	3.488512	-0.14106	-24.4005	-2.41997	12.9502	-45.679
554	-52.7124	-3.77178	2.7108	-0.09719	-20.9075	-1.88662	13.20562	-41.9658
555	-50.2475	-1.85107	2.92999	-0.00346	-19.0889	-1.49503	8.602535	-39.3416
556	-64.8131	-0.46945	1.206794	-0.0096	-23.5878	-2.73291	8.131961	-47.3521
557	-66.0662	-1.58095	1.908695	0	-24.6895	-2.43056	8.026074	-47.2999
558	-61.7005	1.226581	2.512924	-0.01678	-23.5955	-2.91687	5.888719	-44.7995
559	-53.3417	2.067459	2.079308	-0.00445	-20.7095	-2.46838	5.70697	-40.0131
560	-56.8629	-1.07127	1.986869	-0.15276	-21.0186	-2.00597	7.549407	-42.1506
561	-59.0926	-0.31652	1.990402	-0.20453	-21.9807	-1.83937	6.666418	-43.4083
562	-65.6017	-0.49459	3.322578	-0.07169	-23.7334	-2.06375	5.24011	-47.801
563	-60.5654	0.067942	3.839074	-0.04091	-22.5167	-1.94248	4.946792	-44.9191
564	-56.6163	0.784398	4.101682	-0.00498	-21.3449	-1.95783	6.255172	-44.4499
565	-59.3696	1.259546	2.433441	-0.0407	-22.5007	-1.83411	4.854251	-43.5413
566	-55.0432	1.014569	4.714972	-0.00911	-21.9321	-1.77676	4.915658	-41.9705
567	-56.0155	1.674691	2.560487	-0.02705	-21.5635	-2.22781	4.233493	-40.6658
568	-58.9523	1.010219	7.546411	-0.11142	-23.9811	-2.24405	5.059649	-46.232
569	-55.6305	0.526947	3.00382	-0.063	-21.1145	-2.41326	6.238466	-41.809
570	-54.1535	0.813479	1.862181	-0.02481	-20.9196	-1.89926	8.18497	-42.1704
571	-64.2332	-0.01271	2.887885	-0.00672	-23.4841	-1.80974	4.947838	-46.7556
572	-54.5672	-0.6394	4.160546	-0.15692	-21.6082	-1.67604	6.032759	-40.6799
573	-63.9625	2.744946	4.253497	-0.15684	-23.5083	-2.66695	3.66282	-48.2916
574	-57.8094	1.463283	2.887421	-0.00064	-22.0033	-1.59987	6.012479	-44.5687
575	-63.0014	-1.76301	3.487925	-0.04561	-22.3057	-2.91138	7.712785	-47.1763
576	-56.3692	0.286562	5.614346	-0.04203	-21.4617	-1.69525	4.955	-44.0262
577	-67.7816	-0.08346	0.877201	-0.00085	-23.816	-2.56105	7.213288	-49.4107
578	-64.2383	2.694351	0.897709	-0.00673	-23.989	-2.13981	4.20861	-45.9035
579	-67.323	2.741816	-0.56844	-0.0403	-23.7558	-2.63192	3.957214	-47.0256
580	-65.3278	2.138298	1.616231	-0.02097	-23.2612	-2.40336	4.429937	-47.8268
581	-68.3817	0.427217	2.199495	-0.03475	-24.1601	-3.25345	2.71375	-46.2739
582	-65.6231	2.266921	3.529195	-0.11189	-24.4046	-3.76251	4.623941	-47.7642
583	-69.1282	0.36963	2.977012	-0.07405	-25.2113	-4.14618	5.074807	-48.1181
584	-65.5658	1.269814	0.267254	-0.06828	-24.1512	-3.02088	6.713322	-46.5758
585	-60.3821	2.048696	1.552257	-0.0313	-22.8592	-2.75638	5.409991	-43.7461
586	-65.1256	4.080741	1.497307	-0.0049	-23.3581	-2.314	3.991198	-49.0179
587	-81.4737	-2.00211	2.58565	-0.10262	-29.6583	-5.35569	7.753575	-54.6942
588	-82.0084	-3.13597	3.218462	-0.96611	-30.3557	-5.08913	5.994272	-51.6743
589	-76.5056	-2.81273	1.645995	-0.82851	-27.5361	-4.59612	7.620461	-49.9986
590	-72.2919	3.429274	1.67162	-0.09606	-26.6834	-4.00696	5.249831	-51.8562
591	-64.3496	1.522187	0.440058	-0.17563	-22.3582	-2.75222	4.916902	-45.9427
592	-76.0161	-2.11748	1.141808	-0.71963	-26.6595	-3.09278	5.468582	-50.0371
593	-66.8192	2.862168	2.655308	-0.03989	-23.3277	-2.78853	4.093479	-50.274
594	-68.8542	0.971295	1.48936	-0.1143	-24.4217	-2.65889	6.223998	-50.344
595	-68.0468	0.781129	3.175782	-0.05456	-24.2005	-3.37408	7.18065	-51.5552
596	-63.9792	2.31673	1.84909	-0.00785	-23.7654	-2.60536	5.988115	-47.7545
597	-61.0704	-1.65632	3.450691	-0.03167	-21.7888	-2.74472	7.402736	-45.7023
598	-64.1852	-2.41255	1.766329	-0.00193	-23.1277	-2.93851	10.05703	-47.5279
599	-57.615	2.521678	1.012921	-1.32E-05	-21.4232	-3.00749	5.129356	-41.8482
600	-57.1404	1.185909	2.586604	0	-21.544	-2.46807	7.824151	-44.725
601	-67.3647	-0.02722	2.711651	-0.00086	-24.858	-2.88412	5.152268	-47.4584
602	-64.9114	-2.3472	2.184557	-0.08266	-25.2918	-2.54033	11.14525	-47.9793
603	-64.7337	-0.21545	0.996644	-0.01995	-23.8337	-1.82753	6.289569	-46.1233
604	-69.6343	-0.51116	0.791321	-0.03379	-25.021	-3.22868	8.454237	-50.0852
605	-69.1394	0.713775	1.28904	-0.05355	-25.2077	-3.15622	8.378326	-51.1031
606	-66.0576	-0.52838	2.135602	-0.00984	-25.1095	-2.03701	7.026084	-47.5346
607	-68.7749	-1.1144	2.152781	-0.09855	-26.0666	-2.58669	9.720766	-50.7822
608	-68.9357	-0.99828	3.153798	-0.01082	-25.8013	-3.23983	9.02391	-51.0631
609	-60.5403	0.292665	4.340768	-0.00117	-23.1954	-3.04558	6.252214	-45.1838
610	-68.995	-0.48361	2.0182	-0.00356	-24.2328	-2.51624	6.563849	-50.3408
611	-67.1879	-1.87117	1.288428	-0.04236	-23.5439	-2.48701	7.540625	-48.0724
612	-64.3152	-1.38742	3.390156	-0.04365	-22.98	-2.2131	7.730259	-48.8115
613	-69.2607	-3.24612	1.917361	-0.07731	-24.3186	-2.74559	10.48593	-51.2764
614	-65.5973	-0.17916	0.772646	-0.04922	-24.4898	-2.15001	8.670162	-48.1719
615	-67.5383	-2.01592	2.683436	-0.03207	-24.3662	-3.29134	7.75392	-48.2701
616	-69.2999	0.088209	3.264801	-0.02512	-25.0824	-3.59212	5.062286	-49.0156
617	-72.442	-2.42293	3.03757	-0.11467	-24.8371	-2.94447	5.729663	-50.89

618	-65.0746	-0.77944	1.435035	-0.00051	-23.599	-2.37475	7.019573	-46.7755
619	-66.1053	-0.61188	1.386897	-0.00478	-23.8621	-2.99423	5.987512	-46.0068
620	-63.1908	0.126178	1.553787	-0.01179	-23.8742	-2.28238	8.327486	-47.0298
621	-63.0124	0.581953	1.016655	-0.01732	-23.4864	-2.76452	6.151109	-44.4939
622	-73.8934	-1.55106	2.360939	-0.02104	-25.6965	-2.8623	7.256516	-53.38
623	-68.4786	-0.83122	2.303384	-0.00546	-24.0575	-2.77921	7.78993	-50.8986
624	-64.2652	-1.78433	1.373856	-0.00896	-23.1323	-2.08548	7.478623	-46.1066
625	-66.4247	1.16339	2.538153	-0.02134	-22.8477	-3.53057	3.812963	-47.5396
626	-69.5344	-0.66596	1.570321	-0.00903	-25.2852	-2.2972	8.251244	-51.0986
627	-64.843	1.149725	0.445348	-0.00896	-24.0122	-2.48696	5.898823	-45.8288
628	-59.4269	0.875564	1.920375	0	-22.1536	-2.04657	5.135865	-43.1585
629	-62.9789	-0.68017	3.399046	0	-22.7085	-3.31799	9.041784	-48.7131
630	-72.6024	1.368117	0.380862	-0.00037	-25.4517	-3.08556	5.270845	-51.0845
631	-65.0272	-1.46038	1.700129	0	-25.0076	-2.80793	8.992582	-46.444
632	-62.3349	-0.63689	1.612338	0	-23.8349	-2.08279	6.154296	-43.5469
633	-69.3259	-2.13107	1.235439	-0.00158	-25.2032	-2.96267	8.484118	-48.747
634	-67.5683	0.211295	0.394315	-0.03537	-23.8292	-2.75947	7.010725	-48.5606
635	-62.3311	-0.00833	1.614772	-0.01659	-22.7635	-2.93528	7.075853	-45.298
636	-62.2936	-0.18733	0.906692	-0.003	-22.912	-2.24747	6.37805	-44.2286
637	-64.172	-0.29586	2.326153	-0.01355	-23.9362	-2.61572	5.597521	-45.2344
638	-55.5891	-0.79828	2.150413	-0.03027	-20.9843	-1.72267	7.399318	-41.6033
639	-60.5284	-0.66173	2.22239	-0.0102	-22.4281	-1.91869	6.950574	-44.6826
640	-67.6422	0.851685	1.095907	-0.00205	-25.1709	-2.38829	4.949539	-46.9781
641	-59.263	0.813475	1.78691	-0.00735	-23.5463	-2.11568	5.694057	-41.8882
642	-61.0167	0.837561	2.984516	-0.00238	-22.8627	-1.72	4.395493	-44.6493
643	-61.3314	1.834892	2.892491	-5.42E-05	-23.0141	-3.2378	6.888707	-46.6956
644	-60.9482	-0.40909	1.413186	-0.00673	-21.541	-2.08369	5.676633	-43.9975
645	-61.7268	-1.17163	1.177219	-0.75355	-21.5837	-2.80129	8.053743	-44.6476
646	-62.2382	2.218559	2.041676	-7.77E-05	-23.5029	-2.5948	5.384048	-45.7847
647	-65.0681	2.670545	0.597427	-0.00225	-23.0086	-2.82621	5.693275	-48.1923
648	-65.9937	-1.46671	2.248116	-0.14206	-23.2964	-2.39903	5.041094	-45.9787
649	-61.4354	1.123329	1.720092	-0.00336	-22.5645	-2.73558	3.626535	-42.6019
650	-55.5688	0.428648	0.410688	-0.01645	-20.6423	-2.11855	5.942799	-39.5736
651	-55.0977	-0.1125	0.899136	-0.00694	-20.7465	-1.8308	6.096095	-39.3961
652	-62.2518	-1.65405	0.757522	-0.00691	-22.6735	-2.03135	7.165977	-43.8095
653	-60.4706	-1.44076	0.848222	0	-21.9394	-2.7035	8.346655	-43.5818
654	-59.802	-2.40709	3.028776	-0.09321	-23.8939	-2.07133	9.12865	-43.4939
655	-58.5629	-1.3181	0.991686	-0.03972	-21.9752	-2.1325	7.886286	-41.9754
656	-59.4152	-3.44041	2.628629	-0.03343	-22.6317	-2.04618	9.300045	-43.1921
657	-59.4542	-1.39132	2.555321	-0.04227	-22.3679	-2.38061	7.487604	-43.315
658	-62.3009	-1.40238	3.466136	-0.04861	-22.8204	-2.58	6.614983	-45.5305
659	-52.8014	1.005953	2.364714	-0.03677	-19.7287	-2.12454	3.634911	-37.9169
660	-58.1568	-0.60709	1.414026	-0.0045	-21.8002	-1.90813	6.437892	-41.6887
661	-52.2166	3.453304	2.593646	-0.00187	-23.0207	-2.46865	9.390392	-42.1627
662	-51.1824	0.630577	3.249085	-0.00016	-20.6723	-1.76347	7.531837	-40.158
663	-63.5032	-0.64817	0.819579	-0.1663	-22.6934	-2.34592	4.364762	-42.8338
664	-56.8703	-0.02347	2.099376	-0.02281	-21.235	-2.32594	5.19345	-40.5559
665	-57.6649	-1.01666	1.514956	-0.00448	-21.2275	-2.0402	6.768326	-41.6593
666	-56.213	-0.86894	2.08862	-0.09545	-20.41	-2.03861	6.489857	-41.3785
667	-54.4554	-1.49469	1.947138	-0.00305	-20.7095	-1.9348	8.05051	-40.311
668	-54.4954	2.916567	1.335353	-0.03616	-20.2642	-2.44452	4.077566	-40.08
669	-55.535	-3.45413	1.434887	-0.03815	-19.4575	-2.30973	7.457529	-39.1679
670	-58.6224	0.090878	3.320151	-0.00753	-20.2863	-2.40359	4.33321	-43.6692
671	-52.8517	2.178137	6.480194	-0.02369	-19.6058	-1.7635	2.24621	-42.3633
672	-54.9561	0.017004	1.2355	-0.05811	-21.3477	-2.32461	8.307744	-40.7859
673	-57.9705	-1.46096	2.691119	-0.01639	-21.4043	-2.00355	5.057529	-40.8339
674	-59.172	-1.27235	1.852697	-0.00105	-21.2929	-2.22348	4.958309	-41.1932
675	-57.3536	0.499872	4.685528	-0.00423	-20.6927	-1.64897	3.370139	-43.5633
676	-62.0006	1.200218	2.063784	-0.00341	-21.7984	-2.65793	4.869773	-45.6747
677	-56.9841	-0.34295	2.631104	-0.06868	-20.8677	-2.65512	6.011439	-41.6922
678	-59.314	-3.24954	3.022682	-0.01781	-20.1094	-2.40909	5.654046	-42.2049
679	-56.7499	-0.93498	3.087153	-0.00991	-20.3736	-2.28299	4.727222	-40.9629
680	-51.937	-2.01602	5.750709	-0.02509	-19.5227	-1.34221	7.309689	-42.0914
681	-59.1296	-0.912	1.65467	-0.02565	-22.5693	-1.9493	7.440527	-42.7685
682	-55.0885	0.695808	3.532262	-0.00265	-21.1401	-2.0776	5.535298	-41.6315
683	-52.7713	-0.25101	3.156345	-0.00452	-20.9431	-1.92636	7.447593	-40.2502
684	-55.399	-0.88488	1.052913	-0.04551	-21.0204	-1.98859	7.503382	-40.016
685	-54.8427	-0.35813	0.434195	-0.00644	-20.2023	-1.65426	7.33992	-40.3956
686	-68.628	-2.20138	1.644472	-0.11268	-23.973	-2.48941	6.652052	-48.1481

687	-63.0343	-0.74959	0.771935	-0.36515	-21.94	-2.42078	6.760731	-45.0914
688	-63.9293	-3.81466	2.100716	-0.02066	-22.3789	-2.05185	9.333012	-47.0969
689	-60.9672	0.465194	2.173059	-0.01704	-22.9543	-2.5384	6.882305	-44.9781
690	-62.5111	-1.26607	1.847146	-0.0043	-23.3193	-2.04723	6.458893	-44.1802
691	-56.2023	0.029734	0.43646	-0.06673	-22.5393	-2.24608	6.511573	-38.3279
692	-65.8955	-0.1798	2.201332	-0.01352	-24.5559	-2.52524	5.603864	-46.4262
693	-57.0003	-2.99288	1.160743	-0.00194	-20.1492	-1.45792	6.903917	-40.463
694	-65.2663	-0.63468	1.010467	-0.00892	-22.9388	-2.35469	5.148739	-45.4884
695	-54.2222	2.981705	1.68385	-0.00082	-20.1459	-1.91217	3.470339	-40.2992
696	-69.187	-5.7025	2.489887	-0.53447	-23.4008	-1.91071	8.306947	-48.4353
697	-63.9913	0.978569	0.728807	-0.02829	-21.895	-2.65053	6.55731	-47.6822
698	-67.5303	-2.21994	0.533631	-0.07205	-23.5687	-2.23265	6.329114	-46.2996
699	-59.0365	-2.11996	3.427492	-0.024	-21.9374	-2.35898	6.65833	-42.6819
700	-58.5625	-3.26964	3.354064	-0.05891	-21.4747	-2.15384	8.736226	-43.6956
701	-59.6371	-3.6946	4.632077	-0.00737	-20.8307	-2.23019	6.488385	-43.9947
702	-60.6181	0.080415	2.261556	-0.03217	-21.6221	-3.46487	6.206478	-44.0474
703	-63.8494	-3.7068	3.623644	-0.05035	-22.9034	-2.21834	9.074075	-47.6682
704	-67.0255	-6.53924	2.918431	-0.55174	-21.6688	-2.49647	8.17603	-46.8637
705	-67.6547	-0.76805	1.41818	-0.08321	-22.5559	-2.31938	5.089346	-48.4357
706	-65.658	-8.40576	1.791827	-0.51669	-20.0928	-1.56468	6.777347	-43.6473
707	-63.7778	-6.58326	1.792058	-0.50475	-20.1384	-1.3926	7.032573	-43.9834
708	-67.126	-5.34615	2.212434	-0.52973	-21.3695	-1.70442	6.987161	-47.3758
709	-58.5469	-2.06036	2.717188	-0.06696	-20.6975	-1.63438	7.056292	-43.8612
710	-63.5349	-7.49882	3.301071	-0.51958	-20.5963	-2.0436	9.222486	-45.4002
711	-76.9576	-10.9225	1.272066	-0.57518	-24.5942	-2.3741	10.53865	-50.3024
712	-62.507	-3.63836	1.930214	-0.38602	-21.5419	-2.2706	10.10805	-46.7085
713	-67.6398	0.170193	1.084181	-0.00015	-23.0169	-1.86622	4.220756	-48.2317
714	-62.8148	-4.15085	1.554533	-0.55353	-22.0655	-2.26372	5.551517	-40.8872
715	-66.2164	-4.15678	2.390724	-0.52389	-21.9849	-2.16213	7.834845	-47.6142
716	-60.2022	-0.39085	3.114195	-0.05345	-20.2691	-1.82002	4.611694	-45.3946
717	-69.2996	-6.86751	2.756256	-0.5502	-22.2843	-1.93775	6.932018	-47.3481
718	-69.9342	-3.82742	3.526392	-0.86332	-23.0041	-1.97194	7.349414	-51.1432
719	-58.7213	-6.58139	4.837013	-0.53152	-19.699	-2.15172	7.453983	-42.0486
720	-68.1837	-0.66638	2.210574	-0.04066	-23.1474	-2.14959	5.570108	-49.9603
721	-71.9037	-2.38042	0.261264	-0.61575	-23.0779	-1.94455	5.845435	-49.9917
722	-66.0741	-3.19987	3.911769	-0.54951	-22.7768	-2.61172	7.934777	-48.7828
723	-72.8576	-4.0227	1.153615	-0.51038	-23.8158	-2.43801	7.360266	-50.5846
724	-59.6475	-0.86175	1.74368	-0.51249	-21.2941	-2.35932	6.178942	-42.5425
725	-63.9258	-2.21652	1.72002	-0.03157	-22.29	-1.78841	8.492269	-47.8116
726	-58.3167	2.22664	2.350023	-0.12814	-21.7165	-2.12564	6.990565	-45.9136
727	-64.8452	-5.41701	3.132466	-0.8556	-21.8763	-2.09383	9.487733	-47.2227
728	-66.0151	-6.09682	0.363302	-0.62425	-21.8639	-1.74676	8.20167	-44.2483
729	-69.3915	0.423159	1.295158	-0.01245	-24.3283	-2.85524	8.203693	-52.1175
730	-66.5213	-5.96507	1.530735	-0.6273	-22.5402	-1.97512	8.112475	-45.0567
731	-66.0513	-6.59245	1.683492	-0.48378	-21.7391	-2.21359	10.97261	-47.6785
732	-65.0727	-2.1161	1.771973	-0.15796	-23.2588	-2.05721	8.294476	-47.549
733	-68.8856	-6.91575	1.568425	-0.91397	-23.1184	-1.92854	11.6459	-49.2233
734	-68.5222	-3.81641	2.851704	-0.3683	-22.7635	-1.78341	7.467144	-50.1094
735	-65.6645	-7.92379	2.184271	-0.54671	-21.3705	-1.6849	9.224037	-45.5469
736	-61.8625	-0.74808	2.730545	-0.42017	-22.7103	-2.11545	7.164465	-45.7635
737	-56.2596	-0.71152	0.999657	-0.14886	-19.6488	-1.53954	9.659966	-44.8705
738	-61.2967	-2.63994	2.687362	-0.32958	-22.2173	-1.737	10.08869	-47.149
739	-63.0629	-0.86445	4.053475	-0.03787	-24.3007	-1.69135	9.19367	-49.4157
740	-64.163	-2.99402	2.10745	-0.47469	-22.692	-1.96773	8.712887	-46.8549
741	-63.2413	-3.32372	2.309496	-0.16554	-24.3709	-2.68734	12.15283	-47.1561
742	-60.7137	-0.36657	0.404281	-0.1374	-22.4573	-2.57971	8.908928	-44.486
743	-66.9605	-1.39702	1.612545	-0.36219	-24.113	-2.23106	9.77628	-50.2461
744	-61.9476	-0.22196	2.693796	-0.01214	-23.8145	-1.98273	6.076266	-44.6864
745	-61.3995	0.925502	4.310204	-0.00916	-23.5878	-3.14489	5.618657	-45.512
746	-57.7254	-0.42774	1.91742	-0.00586	-22.7838	-2.39978	7.677366	-41.703
747	-58.6086	1.234664	2.317693	-0.00034	-22.6024	-2.15473	6.236394	-43.6399
748	-62.7936	1.572021	1.102249	-0.00433	-22.2122	-2.64995	6.434639	-47.0361
749	-59.7983	-1.01778	2.069818	-0.07672	-23.3382	-1.82081	7.123495	-42.7381
750	-57.1583	0.239102	2.92701	-0.01806	-22.0069	-1.96429	7.384219	-43.7194
751	-57.8755	-0.40843	2.370359	-0.00782	-22.1202	-1.90988	6.84505	-42.6446
752	-53.5835	0.298646	1.565984	-0.02235	-20.6329	-1.94871	5.628933	-38.4731
753	-53.7311	0.304512	1.730012	-0.05603	-20.8693	-2.25806	6.609144	-39.1915
754	-63.2615	-0.10438	1.209869	-0.03393	-23.7777	-2.28305	5.015359	-43.2876
755	-58.6441	0.118508	1.10196	-0.00452	-21.7945	-1.98672	5.076279	-41.1551

756	-55.6559	1.776032	1.481439	-0.25547	-20.6755	-1.76072	5.474132	-41.6958
757	-57.699	1.748607	1.543045	-0.06373	-21.9988	-1.74454	5.021259	-42.2048
758	-58.7038	-0.29005	1.755247	-0.05104	-22.0704	-2.05877	4.876747	-40.8655
759	-58.6257	0.666908	1.788219	-0.01566	-22.4374	-1.95092	4.282232	-40.9591
760	-59.4705	-0.91561	3.341408	-0.03735	-22.1198	-2.0011	5.734971	-43.473
761	-57.4846	0.396948	1.796668	-0.01033	-21.9288	-2.28695	5.66457	-41.1167
762	-65.5509	-0.5664	1.746967	-0.04122	-24.4774	-2.76389	4.161036	-43.61
763	-59.267	-0.60385	2.238927	-0.01004	-22.7752	-2.15482	5.780779	-41.7428
764	-55.9531	-0.57741	2.661979	-0.05029	-20.3294	-2.48979	4.143357	-39.3115
765	-50.5433	4.258818	0.346917	0	-18.8036	-1.73027	3.63109	-38.2462
766	-47.8873	-1.16161	3.24938	-0.00786	-16.5624	-1.74144	6.683877	-38.3472
767	-47.797	2.251053	3.978305	-0.00212	-15.1555	-1.83488	5.151134	-42.1849
768	-43.7466	1.074251	2.253749	-0.00063	-14.7952	-0.52213	5.675668	-37.4324
769	-51.9474	1.186588	2.877056	-0.00049	-16.3544	-0.77532	2.628669	-41.5095
770	-57.9296	0.832065	3.937702	-0.00201	-16.8334	-1.34948	1.981248	-46.4957
771	-53.5283	4.263766	0.870099	-0.00471	-18.1713	-2.22245	3.414343	-41.678
772	-53.523	1.75025	0.317414	-0.00109	-17.8211	-0.68659	1.794214	-38.8761
773	-54.5961	2.683277	3.702132	0	-18.4451	-2.10569	3.904606	-44.3354
774	-57.5439	2.344024	3.370966	-0.00115	-18.7095	-1.98729	3.86596	-46.4269
775	-53.0045	3.735009	2.097833	-0.00057	-18.0103	-0.75934	2.708702	-42.7758
776	-54.3748	4.158646	1.70011	0	-18.6822	-1.02783	1.968951	-42.4925
777	-51.2897	4.374942	3.094341	-0.00148	-16.8805	-1.78838	2.228247	-42.3169
778	-51.132	2.98985	4.077877	-0.00102	-16.8801	-0.66426	2.311178	-42.9656
779	-50.3048	3.146586	3.798455	-0.00479	-16.4026	-0.81345	2.113174	-42.1421
780	-55.7389	-0.49437	2.396581	-0.00098	-16.8793	-1.42328	3.778116	-43.1156
781	-54.4566	1.36875	3.200357	-0.00042	-16.7473	-2.09341	3.879734	-44.0644
782	-54.6791	5.640825	0.636862	-0.00582	-17.9396	-1.45916	1.64377	-43.196
783	-49.4239	2.107521	3.465279	-0.03642	-17.196	-1.14046	3.454684	-40.0785
784	-42.111	6.37031	0.749623	-0.02366	-11.3542	-2.53265	-0.0005	-35.3199
785	-51.3127	2.75593	-0.06312	-0.08645	-14.9197	-2.56765	1.631378	-38.0631
786	-52.5541	4.779499	1.679134	-0.00262	-16.4409	-2.68879	1.090851	-40.9712
787	-51.2947	7.148574	-0.11887	-0.03704	-14.516	-2.27045	-0.89344	-40.6074
788	-45.242	3.820313	1.9869	-0.11994	-12.3715	-2.94304	1.128074	-36.7427
789	-59.9122	3.432594	1.174768	-0.34583	-17.9908	-2.96514	3.52107	-46.7389
790	-48.3558	0.770558	3.428501	-0.00109	-16.4802	-0.82111	3.60736	-38.8598
791	-46.0542	2.451587	3.433293	-0.00685	-16.6875	-1.21417	3.631212	-37.6617
792	-43.4935	5.76602	1.591355	-0.001	-14.8729	-0.70364	1.521392	-36.7947
793	-51.303	3.894284	2.36501	-0.0023	-16.6997	-0.93236	0.221539	-40.1495
794	-53.4102	6.784458	1.532049	-0.00767	-16.6468	-0.72578	-1.63506	-42.7115
795	-51.1691	2.586102	3.328766	-0.00072	-16.6305	-2.15911	3.642767	-41.9364
796	-48.9057	2.279721	3.116072	-0.00064	-16.4845	-0.44603	2.615915	-39.9863
797	-57.7058	-0.36081	4.910059	-0.42208	-17.4684	-2.62872	4.387756	-46.1236
798	-45.7747	2.033468	3.507287	-0.00202	-15.264	-2.02404	4.770705	-38.7961
799	-53.0056	1.386513	1.902634	0	-16.5949	-2.08548	4.497618	-42.1119
800	-45.0644	2.894787	4.061305	-0.00103	-14.0434	-1.26528	3.563716	-40.2745
801	-53.5094	2.158453	3.169325	-0.00166	-17.0888	-1.05553	5.545406	-46.2366
802	-47.8189	4.415341	2.623515	-0.00184	-15.0925	-1.92683	2.449746	-40.2864
803	-43.8747	0.913764	1.910094	0	-14.2407	-1.89814	7.072745	-37.6325
804	-55.3796	1.733135	2.601903	0	-18.5202	-1.86721	2.652128	-41.9794
805	-51.8819	1.737123	4.487145	-0.00179	-16.4639	-1.50383	4.846843	-44.9835
806	-56.2133	4.166483	4.267319	-0.00546	-18.5545	-2.34548	2.64026	-46.3819
807	-49.9066	1.660574	2.278033	-0.00011	-15.7878	-1.28072	1.853341	-38.6299
808	-53.8264	2.811021	2.447421	-0.0042	-17.531	-0.91726	2.40195	-43.0343
809	-54.0973	-1.07565	3.221718	0	-16.7524	-1.60056	5.318596	-43.209
810	-48.141	0.640959	4.108417	0	-16.5051	-0.99504	2.802446	-38.1927
811	-53.4721	2.104574	4.10072	-0.00047	-17.4102	-2.99424	5.470592	-44.7431
812	-47.8385	1.008778	2.455057	-0.00272	-14.9026	-0.90013	2.388217	-37.8852
813	-50.1357	2.226358	3.194447	-0.00445	-15.2972	-1.07423	3.016037	-42.1967
814	-49.3027	4.672995	2.552516	-0.00087	-17.7214	-0.60759	3.084656	-41.283
815	-48.4825	3.695076	3.633313	-0.00216	-15.8585	-2.60887	2.455479	-39.7968
816	-49.2572	4.520451	2.667324	-0.00085	-16.0778	-2.99012	3.016768	-40.3931
817	-58.9861	5.059112	3.041891	0	-20.3366	-3.25581	3.024134	-46.5188
818	-52.2388	2.880536	2.607031	-0.00154	-17.5454	-2.27219	3.648546	-41.5559
819	-60.2005	1.897771	3.389271	-0.00475	-18.8012	-2.78712	2.295319	-46.1898
820	-54.8666	6.458457	3.371047	-0.01481	-19.2609	-3.38615	4.048205	-46.0825
821	-60.7844	1.811979	3.06339	-0.00099	-19.4337	-2.235	3.468278	-47.4583
822	-52.2643	2.703853	4.88245	-0.03228	-19.0279	-2.25349	4.808833	-43.3458
823	-63.4327	2.163672	3.468611	-0.00072	-20.4556	-3.92646	4.4849	-49.1671
824	-57.9869	3.207939	3.699574	0	-17.6829	-2.64666	2.850373	-47.4153

825	-59.8841	5.125119	1.081415	-0.00016	-19.5221	-3.61134	2.866109	-45.8232
826	-58.3678	3.262339	3.497563	-0.00151	-19.6675	-3.12803	4.392579	-46.7232
827	-63.0543	0.16403	5.964632	-0.03178	-20.2917	-3.46114	6.06937	-51.4677
828	-71.6215	-0.36583	4.223766	-0.25487	-21.5873	-4.38891	3.790906	-53.0393
829	-69.1763	-3.02191	4.426371	-0.43915	-21.1387	-3.86181	5.315893	-50.457
830	-60.1899	-0.52265	3.113524	-0.25347	-17.4015	-1.9551	4.021723	-47.1924
831	-61.9875	-0.81066	2.1492	-0.48295	-17.807	-3.49195	8.059775	-49.6039
832	-55.0193	4.480267	3.335206	-0.56096	-17.1873	-2.16609	1.47296	-44.3934
833	-65.6435	1.104251	2.604883	-0.16528	-18.9226	-4.44593	3.9759	-49.7947
834	-54.0612	3.07919	0.710346	-0.00281	-15.8208	-2.481	2.476934	-42.023
835	-64.2391	-0.56119	4.944944	-0.24037	-20.0911	-4.34287	4.735157	-48.6837
836	-57.5344	-0.96676	9.586915	-0.27522	-18.8764	-2.98973	4.685632	-48.6988
837	-62.6327	-4.21648	6.988927	-0.22703	-20.6879	-2.93901	9.131258	-50.6824
838	-65.3232	-4.33569	3.607354	-0.79879	-18.6844	-3.71717	9.571467	-50.9659
839	-72.7592	0.616247	1.932862	-0.00735	-21.2732	-4.13081	4.679126	-54.576
840	-66.7016	5.87599	-0.89546	-0.05253	-19.1772	-2.83524	-0.09589	-49.5213
841	-56.2573	2.819301	2.313062	-0.29805	-17.2914	-3.51346	5.745369	-46.0321
842	-68.3925	1.222033	4.510859	-0.0757	-22.1371	-4.42915	4.334644	-51.8181
843	-63.8245	-0.94754	4.886846	-0.26791	-19.794	-2.54456	2.654239	-47.8115
844	-58.2487	5.197632	0.575436	-0.23188	-17.4375	-2.67954	1.983582	-45.6564
845	-71.5622	-0.03726	3.106596	-0.24535	-19.9405	-4.42713	3.873982	-53.8926
846	-61.0331	1.319492	3.598999	-0.38565	-18.7371	-2.80986	4.117849	-48.1368
847	-67.3625	-1.51074	2.39167	-0.12801	-18.662	-3.96522	5.416876	-50.9051
848	-71.3788	1.702341	2.007163	-0.06405	-20.7844	-3.63566	3.360143	-53.9643
849	-60.2194	1.522609	2.034928	-0.00324	-18.3133	-2.74998	2.571397	-45.2818
850	-66.66	1.445291	2.08853	-0.09197	-19.2331	-2.93615	3.246361	-51.1789
851	-71.4821	-4.35411	4.358457	-0.00877	-21.7193	-4.60034	7.321281	-52.4793
852	-70.0551	0.130314	2.706654	-0.47883	-20.7014	-3.88667	5.182681	-53.0079
853	-65.3022	0.263275	3.581403	-0.34575	-20.4801	-3.94398	3.95267	-48.3297
854	-57.026	3.757019	2.257439	-0.0146	-16.7167	-3.28985	3.571682	-46.5909
855	-72.2708	-2.12185	3.034465	-0.28118	-20.8075	-3.61088	6.083292	-54.5671
856	-63.6343	1.159218	3.404806	-0.3343	-18.0547	-3.50693	2.825755	-49.1282
857	-67.0686	2.221424	3.751611	-0.03791	-21.6486	-4.2694	5.146197	-52.2319
858	-80.2287	-4.27094	4.513352	-0.43606	-22.368	-3.72266	3.751013	-57.6954
859	-63.6101	-2.39587	2.963673	-0.10882	-18.4036	-2.95561	5.452588	-48.1625
860	-71.6214	-2.95562	2.452173	-0.34811	-20.808	-2.80545	4.715701	-51.8721
861	-62.2424	-0.4874	2.846751	-0.31799	-17.3299	-3.13996	4.124036	-47.9379
862	-56.1869	5.76306	3.255805	-0.57667	-16.9796	-2.78324	1.153015	-46.0193
863	-53.5073	2.732926	5.710607	-0.01262	-17.5689	-1.45152	3.05792	-45.9757
864	-69.8178	0.079123	2.157974	-0.42061	-20.1147	-3.68024	5.125411	-52.9648
865	-61.1506	0.445872	3.564446	-0.32817	-19.2698	-2.64961	5.057377	-47.9706
866	-50.5146	0.267485	3.494823	-0.02863	-16.8886	-2.26743	6.593346	-41.6856
867	-47.0528	3.403948	2.649513	-0.00151	-16.0066	-1.50501	3.278922	-38.8721
868	-49.3466	-0.75796	2.882444	-3.17E-05	-16.2768	-1.5958	3.434035	-37.0325
869	-50.7625	2.848211	3.91113	-0.00044	-16.4623	-2.65668	6.238654	-44.6411
870	-61.6425	0.479152	2.901011	-0.00092	-19.3726	-2.01949	4.09753	-47.7272
871	-55.4853	1.195482	5.040791	-0.00129	-18.2628	-1.54941	4.170514	-46.0786
872	-50.3198	3.514178	2.33473	0	-16.432	-1.21266	2.396192	-40.9202
873	-55.589	3.923126	2.252937	-0.00077	-17.9123	-1.88952	2.806968	-44.7694
874	-57.3917	-0.04962	4.118056	0	-17.5965	-2.42555	4.699778	-46.1378
875	-68.8829	-3.55001	4.354576	-0.41966	-19.1823	-4.18251	4.390325	-50.2932
876	-56.5425	-0.37045	4.00504	-6.56E-05	-18.4044	-2.13722	3.978684	-43.6141
877	-54.1773	-0.94212	3.068338	0	-16.7875	-0.91262	3.624864	-42.2282
878	-66.3567	-1.05569	6.671205	-0.26187	-20.4465	-4.25618	3.821073	-50.8288
879	-52.7458	4.670681	1.872584	-0.003	-16.7373	-1.80533	2.451812	-43.1952
880	-55.9149	4.152636	1.214162	-0.46507	-15.1703	-2.90082	1.615434	-44.3609
881	-62.1347	2.553878	4.322336	-0.26263	-18.6014	-2.82331	2.274376	-49.598
882	-51.3485	3.794974	2.796269	-0.31858	-15.8631	-1.65688	3.21799	-43.3192
883	-58.1629	-2.09737	4.775376	-0.64248	-16.4245	-2.28749	4.788807	-46.2752
884	-47.5999	3.733841	3.474311	-0.00328	-14.7378	-1.46639	2.854064	-41.4546
885	-54.6397	2.333452	4.179926	-0.00205	-16.5121	-1.01252	3.030599	-46.657
886	-52.2661	4.485039	3.124036	-0.00111	-17.1334	-0.81646	2.309477	-44.2337
887	-45.9912	2.171136	1.804891	-0.00133	-13.7437	-1.05358	1.293268	-36.4619
888	-50.3712	7.232618	1.663761	-0.00332	-16.3892	-0.96545	0.777803	-42.6874
889	-48.2659	0.365939	3.061899	-0.00014	-15.8689	-0.59591	4.887686	-40.1165
890	-55.8345	2.493992	2.640145	-0.62957	-16.8728	-3.03907	4.543104	-44.9704
891	-49.9317	4.545649	3.695545	-0.0009	-16.5705	-0.23526	2.013923	-43.3801
892	-55.9874	4.229369	1.289854	-0.00282	-18.4776	-1.87463	2.321016	-43.4726
893	-48.7871	7.456547	3.328209	-4.45E-05	-15.2995	-2.83865	2.088366	-43.5221

894	-60.2506	6.521107	1.80383	-0.00241	-18.4441	-3.1179	0.563315	-47.5745
895	-54.2663	4.737823	3.765045	-0.0024	-17.9625	-1.57882	2.641484	-45.867
896	-51.0614	4.741171	1.934056	-0.00324	-16.0617	-1.79443	3.043297	-42.9205
897	-48.5615	5.280801	4.266119	-0.01117	-16.4083	-1.68957	3.835192	-43.8346
898	-56.3606	2.565296	2.677392	-0.02973	-16.628	-2.63585	3.338343	-45.6481
899	-64.8802	1.157855	3.717732	-0.33047	-17.8827	-3.1875	1.67349	-50.0286
900	-50.1182	-1.1812	1.961627	-0.00731	-15.4599	-2.08667	5.177508	-38.5223
901	-52.8667	3.163575	3.753921	-0.00634	-17.781	-2.39294	3.451669	-43.0555
902	-56.4607	2.540385	3.222662	-0.00146	-17.7382	-2.71714	3.938508	-45.7054
903	-46.2245	2.662625	3.010747	0	-15.6232	-0.72488	1.995432	-37.5452
904	-58.3582	3.531916	1.505593	-0.57226	-16.4323	-3.08824	2.22629	-45.5292
905	-59.5104	1.980658	3.187967	-0.62193	-16.4751	-2.68288	3.429169	-48.3282
906	-60.9043	-0.79986	3.682212	-0.23718	-17.2613	-2.56764	3.10537	-46.826
907	-53.189	4.45042	2.936569	-0.06686	-16.1816	-1.58374	1.465846	-44.2096
908	-53.2969	2.296364	0.805336	-0.04138	-14.4019	-3.04935	2.568796	-41.4748
909	-59.8242	-1.77212	5.251972	-0.57313	-17.6902	-2.24465	4.789546	-47.5856
910	-57.1462	3.283744	1.268755	-0.04263	-16.9605	-1.93165	1.42992	-44.1939
911	-56.5253	5.043373	-0.45617	-0.04417	-16.1884	-3.20893	2.033976	-43.705
912	-62.3075	2.073404	2.771681	-0.10633	-17.9315	-3.04977	3.440647	-49.5056
913	-59.1358	2.398599	1.95704	-0.15934	-19.124	-2.90405	3.70806	-45.0121
914	-60.8528	0.982079	3.009781	-0.00248	-18.8512	-3.71969	4.687405	-46.9587
915	-56.2169	5.973446	3.252558	-0.44828	-18.5815	-3.16825	2.839176	-46.084
916	-55.9218	4.359031	2.661251	-0.00316	-18.1038	-1.99472	1.719619	-44.56
917	-57.999	3.268287	3.39811	-0.00297	-18.9139	-2.59463	3.344999	-46.4989
918	-53.6745	2.203587	1.924655	-0.00165	-16.4711	-1.61959	1.406092	-41.1165
919	-60.9123	1.902813	3.888174	-0.0641	-18.0292	-2.90427	2.002516	-47.7082
920	-56.4636	2.094564	6.623039	-0.01777	-18.7105	-1.75916	4.325911	-49.0197
921	-65.0354	1.160717	4.291725	-0.3576	-19.4078	-3.47665	3.252199	-50.498
922	-65.0104	0.677482	2.476628	-0.33842	-17.8194	-3.10374	2.515804	-49.4188
923	-60.0176	0.260369	2.915627	-0.40996	-17.2454	-1.95586	3.604415	-47.1868
924	-62.38	2.183374	1.818299	-0.0378	-19.0314	-2.09546	2.019458	-47.2365
925	-57.3115	2.828107	4.438978	-0.52165	-17.0372	-2.49289	1.868691	-46.3955
926	-59.217	1.125828	3.300009	-0.06211	-17.8951	-1.40293	1.916072	-46.1988
927	-59.1721	0.247435	1.757062	-0.18955	-17.8615	-2.37642	3.667405	-44.4165
928	-59.7748	1.88452	2.724402	-0.67959	-17.0089	-2.2569	4.233744	-48.672
929	-64.7375	1.671312	2.895902	-0.26468	-18.7591	-4.08295	6.898679	-53.0967
930	-51.9358	2.140999	3.441029	-0.05998	-15.9985	-2.28499	3.738559	-42.9129
931	-59.532	1.011894	2.203513	-0.31855	-16.5745	-2.89137	4.827934	-47.7908
932	-63.1865	1.101961	6.213742	-0.25593	-17.8984	-2.88427	2.231968	-51.6956
933	-61.5551	1.355424	1.585888	-0.76826	-17.6312	-3.39359	5.31529	-48.0187
934	-61.5572	-1.98989	3.679499	-0.1549	-18.8816	-2.59415	5.84086	-47.4569
935	-57.1087	-0.88041	4.265533	-0.81575	-17.0019	-2.00801	4.358954	-45.0271
936	-57.4056	-2.25582	4.407563	-0.01328	-16.9405	-2.13684	4.998671	-45.4654
937	-62.1244	-1.31524	3.428862	-0.02252	-17.8267	-2.80012	4.340121	-47.9288
938	-62.1329	-2.01197	3.917417	-0.45664	-18.0049	-2.72409	4.849309	-47.702
939	-61.2338	1.079976	4.083925	-0.78776	-18.1622	-3.18997	3.694339	-47.9521
940	-63.9312	-0.92954	3.788622	-0.49686	-19.1263	-2.9942	4.104875	-48.2778
941	-57.4595	3.219278	1.439971	-0.21785	-17.6325	-2.39562	3.398029	-45.2708
942	-57.91	-0.45837	4.10532	-0.47932	-17.7534	-2.53213	3.002552	-43.7946
943	-61.2221	-1.58235	3.823643	-0.32639	-17.2388	-2.81872	4.656592	-47.7361
944	-63.2875	1.153972	3.179185	-0.86602	-18.1628	-2.57853	3.860949	-49.8742
945	-67.2631	-1.4738	2.218994	-0.76027	-18.486	-3.30987	4.141528	-49.5937
946	-59.7096	3.141374	3.72785	-0.00541	-18.7268	-3.62545	3.129377	-47.3505
947	-58.7409	0.61469	5.676274	-0.15059	-19.5144	-2.07274	4.367198	-47.6613
948	-58.5453	2.182727	4.279222	-0.59574	-17.1379	-2.76203	2.892798	-47.4044
949	-56.6556	4.479717	3.376953	-0.63561	-17.6082	-2.9021	5.259491	-48.6259
950	-60.6427	2.551827	2.925193	-0.48309	-17.8239	-3.44329	4.240013	-48.6094
951	-60.8255	2.325295	3.819589	-0.32742	-16.6772	-3.48385	2.310175	-48.7921
952	-55.772	3.617349	6.273922	-0.46202	-17.9615	-1.74014	2.554836	-48.0545
953	-59.013	4.233715	3.228397	-0.00023	-17.0208	-2.99939	2.439092	-48.8938
954	-64.0681	6.837428	1.258503	-1.88E-05	-20.1715	-3.10203	2.826141	-51.7167
955	-58.1794	3.284715	3.1368	-0.00102	-18.1737	-2.76319	2.141361	-45.8043
956	-55.1791	5.922068	3.276964	-0.00331	-18.4249	-1.05028	1.034571	-45.9342
957	-61.0995	1.870641	4.354511	-0.29483	-18.1279	-3.47195	2.266794	-47.6968
958	-58.3181	3.584191	3.394507	-0.30558	-16.2092	-2.96904	1.277475	-47.0905
959	-61.4862	4.598495	3.209562	-0.00916	-19.2963	-3.19126	1.240375	-48.0379
960	-58.7064	4.967784	2.734084	-0.04298	-19.6834	-1.65169	0.576025	-45.6063
961	-58.7621	3.053934	3.054298	-0.39289	-16.8341	-3.13629	3.174413	-47.6815
962	-61.5877	3.049286	1.403918	-0.28456	-16.6619	-2.61874	2.132918	-48.6085

963	-55.905	5.617605	1.810411	0	-18.1278	-2.46063	2.408006	-45.1526
964	-58.6805	-2.93552	4.370496	-0.37834	-18.2412	-2.18929	5.83913	-45.1458
965	-65.2169	2.384504	3.219642	-0.0768	-19.2132	-3.54035	4.05907	-52.0498
966	-61.6324	1.641844	3.849328	-0.46229	-18.0066	-2.56608	2.609443	-48.6981
967	-59.6066	-0.09666	3.162889	-0.32418	-16.8695	-3.12889	5.325292	-47.6756
968	-54.1136	1.756402	3.334057	-0.00154	-16.2218	-1.38419	3.270859	-44.8674
969	-58.8156	-1.35778	3.904034	-0.80224	-17.4949	-2.83204	6.04341	-46.2761
970	-54.2286	4.129687	2.552002	-0.0027	-17.4121	-0.87231	4.213693	-46.8369
971	-55.3911	2.692347	4.301598	-0.15652	-17.0475	-2.37214	2.795123	-45.604
972	-59.9236	0.969671	1.637371	-0.42329	-17.6574	-3.38802	2.937122	-43.9991
973	-49.5246	2.883736	1.959763	-0.00163	-15.2428	-3.70446	3.927161	-39.3464
974	-60.3663	-0.79777	1.081482	-0.56854	-17.0258	-2.9262	6.57989	-46.7093
975	-60.7642	-2.17783	3.819538	-0.13005	-18.143	-2.32558	4.47134	-46.2787
976	-64.9887	-0.04502	2.059494	-0.31924	-17.8622	-3.28731	4.083863	-49.6182
977	-60.7415	-0.26691	2.692462	-0.20061	-16.5815	-3.17393	4.236249	-47.4472
978	-59.3574	-1.92637	6.166363	-0.43087	-18.0013	-2.72742	5.148946	-47.5868
979	-59.0167	-0.99643	2.942839	-0.32166	-17.817	-2.64876	5.652705	-45.8284
980	-70.0188	-0.87085	4.04503	-0.05534	-20.6728	-3.2797	5.543804	-54.729
981	-67.7883	-0.58556	2.15	-0.0217	-20.9134	-3.38882	4.397053	-49.4258
982	-55.4629	2.486865	1.328108	-0.00326	-16.8352	-1.5361	2.874433	-43.7778
983	-53.3406	5.487685	1.386066	-0.00069	-17.4244	-0.90774	-0.55892	-41.3226
984	-63.5697	0.417471	2.298488	-0.37396	-19.3663	-3.87695	3.609496	-46.278
985	-66.9425	-0.3878	3.462899	-0.01677	-19.2212	-3.7195	3.305843	-50.3659
986	-64.2148	-0.34447	4.370776	-0.0539	-19.1864	-2.26919	4.320036	-51.0517
987	-67.8483	0.95772	2.258577	-0.11315	-20.3494	-2.95493	1.373925	-49.021
988	-62.9846	3.862857	1.991591	-0.64724	-19.5977	-2.68313	2.304769	-48.2157
989	-54.6093	3.880484	2.970665	-0.57482	-16.8119	-2.13211	2.59926	-44.541
990	-62.4486	3.699803	2.066509	-0.00877	-19.7112	-3.17803	3.148406	-48.4653
991	-61.3781	0.395962	3.51215	-0.19256	-17.9732	-2.2917	2.851729	-47.6805
992	-64.8259	1.239948	2.543907	-0.23327	-18.6471	-3.27096	2.126242	-48.5847
993	-63.0326	3.837393	4.767516	-0.47138	-18.2861	-2.51039	1.249363	-51.619
994	-62.1819	4.371482	3.726871	-0.00764	-19.7171	-2.59215	2.889238	-50.8526
995	-63.5251	3.485361	1.685439	-0.2166	-18.4808	-2.38385	0.852204	-48.4669
996	-62.4727	0.849464	2.376151	-0.14364	-17.7924	-1.9976	1.46803	-47.2326
997	-68.2258	-0.48701	1.981374	-0.48079	-19.5816	-3.34807	4.862833	-51.1725
998	-62.4656	-0.35094	2.917083	-0.58138	-19.3535	-3.16958	5.361008	-47.2883
999	-60.3105	-0.0253	5.633063	-0.13486	-19.0853	-2.97856	6.879046	-50.5986
1000	-61.0134	2.043618	4.74757	-0.23862	-19.1002	-3.30429	3.074931	-48.2364
Avg	-60.70027518	0.130708257	2.460064775	-0.197166531	-20.5009114	-1.974654724	5.470834105	-46.08914966
std	7.732732	3.268992	1.370235	0.246219	3.062095	0.931072	2.569421	4.478695
min	-42.111	7.593719	9.586915	0	-11.3542	-0.00663	14.45974	-34.491
max	-82.0084	-10.9225	-0.89546	-1.09797	-30.3557	-5.35569	-1.63506	-57.8545

Table S3. Binding free energy components for nsp3-STOCK1N-45901 complex calculated by MM-GBSA approach

Frame	MMGBSA							
	ΔG_{Bind}	$\Delta G_{Bind_Coulomb}$	$\Delta G_{Bind_Covalent}$	ΔG_{Bind_Hbond}	ΔG_{Bind_Lipo}	$\Delta G_{Bind_Packing}$	$\Delta G_{Bind_Solv_GB}$	ΔG_{Bind_vdW}
1	-64.55535506	-35.0995	5.225546	-3.41393	-14.1098	-1.1522	18.00847	-34.01402166
2	-53.2409875	-19.6628	0.017016	-2.70787	-12.5854	-0.28055	17.09082	-35.11219105
3	-54.75599295	-35.4718	4.964047	-3.19158	-11.7917	-0.56996	24.04738	-32.7424091
4	-67.49911347	-45.2424	6.578955	-4.13122	-13.6241	-0.47489	25.65291	-36.25841545
5	-53.57391355	-31.3861	8.019598	-2.19824	-13.8503	-0.3796	23.45703	-37.23625516
6	-52.00483895	-28.1162	5.336938	-1.74935	-14.2357	-0.3565	24.39132	-37.27538158
7	-64.50501786	-34.9508	5.069016	-2.60102	-14.9478	-0.41539	24.51001	-41.169046
8	-58.31233125	-26.9483	3.419805	-2.31778	-14.4238	-0.72912	20.08716	-37.40028786
9	-61.67582835	-35.4632	3.771174	-2.6445	-14.1641	-0.55368	25.3013	-37.92280765
10	-61.74653613	-33.974	5.40047	-2.60112	-14.589	-0.6067	23.44567	-38.82181036
11	-60.30775827	-32.3372	5.405592	-2.46546	-13.9424	-0.3914	22.8996	-39.47646067
12	-54.56229803	-31.7568	4.833655	-2.25404	-13.1946	-0.13061	22.89583	-34.95574328
13	-63.59925637	-34.6422	6.315159	-3.00402	-14.2605	-0.24806	23.76458	-41.52423791
14	-58.66179857	-33.0924	7.169523	-2.59904	-13.6922	-0.45872	23.03849	-39.0274797
15	-53.04936145	-22.6846	1.810424	-1.35851	-13.1277	-0.2903	19.52402	-36.92269617
16	-55.51811972	-32.1353	4.670436	-2.16175	-13.0316	-0.53086	25.81416	-38.14324137
17	-59.65648977	-27.8922	5.392414	-2.33286	-14.7223	-0.54915	23.69201	-43.24437253
18	-67.33088946	-35.4263	6.998534	-3.10055	-14.6938	-0.31283	22.6945	-43.49044164
19	-60.56987638	-25.1889	2.446939	-2.53651	-14.1287	-0.40488	19.83521	-40.59299625
20	-63.47197045	-33.9835	7.46451	-2.70991	-14.3984	-0.2279	23.50085	-43.11761407
21	-50.15046239	-30.8002	8.184484	-2.00072	-12.6783	-0.01924	25.46962	-38.30609433
22	-61.56302635	-29.6027	7.230667	-2.2851	-15.2503	-0.48914	23.98369	-45.15023347
23	-65.67659741	-36.1438	6.251063	-2.8222	-14.4593	-0.19065	24.44852	-42.76019527
24	-61.07058028	-34.628	7.537061	-2.3434	-14.2507	-0.15078	26.68189	-43.91668393
25	-57.10723543	-29.6811	8.678508	-2.1327	-14.4195	-0.4302	25.01908	-44.14139413
26	-60.37676298	-34.464	6.201798	-3.13512	-14.3476	-0.19145	21.64066	-36.0810859
27	-62.02533891	-35.4884	7.103599	-3.03871	-15.36	-0.7152	23.49902	-38.02560796
28	-60.78971289	-35.5048	7.856756	-2.48594	-14.6398	-0.51481	26.0968	-41.59789608
29	-60.17817469	-30.7777	6.755403	-2.53253	-14.3579	-0.24653	22.75195	-41.77081275
30	-67.34236195	-36.984	6.763227	-2.76521	-16.2846	-0.49498	25.7562	-43.33304614
31	-58.18466477	-32.0648	6.95382	-2.67923	-12.9417	-0.08467	22.47583	-39.84393431
32	-55.87397555	-33.5638	6.725849	-2.4069	-13.8936	-0.2923	26.26589	-38.70909227
33	-63.19467308	-37.0918	6.323554	-2.40754	-14.5796	-0.41909	26.31304	-41.33324356
34	-58.05732888	-31.0441	6.623089	-2.32447	-13.953	-0.20634	27.21889	-44.37138722
35	-54.77229308	-31.215	6.893189	-2.51914	-13.1954	-0.08252	25.38724	-40.04061822
36	-59.24482751	-36.0364	4.585912	-2.55926	-14.1685	-0.2174	26.14947	-36.99868671
37	-56.36877251	-32.1555	6.542428	-2.69902	-14.1638	-0.59025	26.03741	-39.34005543
38	-58.43104737	-41.251	8.560592	-2.77907	-12.984	-0.13517	25.32126	-35.16366562
39	-54.88087772	-29.8848	7.131249	-1.99074	-13.8696	-0.51497	23.21697	-38.96897922
40	-65.63682669	-39.1329	6.435426	-3.84949	-14.0451	-0.1791	26.62035	-41.48593257
41	-61.33283911	-33.8873	3.511363	-2.64025	-13.8998	-0.53275	24.83955	-38.72364589
42	-58.47794952	-31.9327	7.423937	-2.63966	-13.743	-0.27897	23.00364	-40.31121569
43	-51.88059107	-30.7976	7.224975	-2.11467	-12.7199	-0.52985	24.94318	-37.88673447
44	-58.40048251	-25.5646	3.229579	-2.44464	-14.0598	-0.39634	19.97229	-39.13694182
45	-59.42024666	-25.7054	3.259621	-2.01936	-14.1868	-0.82415	19.36607	-39.3101666
46	-62.64736938	-33.357	2.168482	-1.76815	-14.4227	-0.57707	25.4299	-40.12080318
47	-52.69891105	-32.0175	9.165153	-2.2942	-13.1302	-0.85815	25.12165	-38.68568288
48	-57.88073056	-28.846	4.783085	-2.49174	-14.8157	-0.59861	23.6893	-39.60101212
49	-57.66456559	-31.7093	7.458055	-2.31398	-13.6161	-0.13601	22.59745	-39.94475793
50	-61.31489097	-32.6845	5.874503	-2.51776	-13.6363	-0.02121	20.75624	-39.08582762
51	-55.15778866	-32.7485	4.124372	-2.06835	-12.9875	-0.16945	26.43945	-37.74777297
52	-56.77780609	-27.897	5.217685	-2.29024	-14.4657	-0.64706	21.34818	-38.04367191
53	-54.51045238	-28.7829	6.271552	-2.26089	-13.4071	-0.01619	22.19404	-38.50896425
54	-60.16655439	-37.9617	6.575769	-2.57138	-13.7281	-0.52378	26.26264	-38.2199763
55	-58.94449825	-20.3006	2.509971	-2.71655	-14.8045	-0.60367	16.39279	-39.42198862
56	-56.23573694	-22.7213	3.38085	-2.17171	-14.2245	-0.57743	20.36841	-40.29008335
57	-62.59431353	-28.3059	2.908976	-2.53986	-14.0079	-0.12234	19.69257	-40.21985505
58	-60.82572014	-34.7109	5.74089	-2.97861	-14.5109	-0.59338	22.5593	-36.3320972
59	-61.90795306	-36.3516	5.697065	-2.5921	-13.7713	-0.59514	23.4926	-37.78745521
60	-60.02374232	-32.5243	5.158856	-2.54252	-14.1574	-0.61871	21.19295	-36.53264606
61	-59.67719873	-32.3549	5.907067	-2.40587	-13.1334	-0.1827	22.45792	-39.96533048
62	-53.87821813	-30.8916	7.617909	-2.37917	-12.3527	-0.20835	22.90045	-38.56482294
63	-53.29866123	-25.3705	5.12055	-2.13632	-13.6416	-0.44165	19.41609	-36.24529252
64	-56.93855578	-25.3807	1.551625	-2.0939	-14.2345	-0.55845	19.07252	-35.29520616

65	-61.07624094	-35.1617	5.675192	-3.15865	-14.0853	-0.58364	22.99724	-36.75938545
66	-57.47088171	-30.3121	5.930462	-2.57495	-13.3987	-0.58683	21.50924	-38.03805809
67	-56.78698695	-35.9419	7.413377	-3.01742	-11.8532	-0.17529	26.17935	-39.39188712
68	-59.08469807	-36.8102	7.588831	-2.97416	-12.5976	-0.18321	23.11112	-37.21955361
69	-58.3828843	-30.9594	5.646819	-1.82256	-15.0664	-0.94497	24.02413	-39.26049323
70	-50.53014531	-24.041	2.373854	-1.7646	-12.0207	-0.63621	19.65191	-34.09342766
71	-58.57969458	-31.6668	5.816423	-2.36833	-13.5253	-0.4673	21.77239	-38.14071584
72	-61.03456119	-34.6842	4.474472	-2.40563	-13.8791	-0.39538	22.25408	-36.39878051
73	-59.42077605	-33.4482	7.446356	-2.29301	-15.6175	-0.47337	27.52089	-42.55588512
74	-59.13428045	-35.1928	7.137847	-2.32811	-14.0547	-0.17209	27.4926	-42.01702767
75	-55.77726079	-32.3654	6.943111	-1.92631	-12.758	-0.05356	22.23635	-37.85348299
76	-63.54015859	-37.2026	7.679578	-2.32439	-15.1353	-0.2138	27.07735	-43.42097013
77	-56.44197659	-32.5106	4.548237	-1.55974	-12.8113	-0.1397	23.90132	-37.87022098
78	-57.54569683	-34.7283	8.049452	-2.19197	-14.4855	-0.75274	24.75741	-38.19399313
79	-61.47217593	-28.7524	5.386817	-2.38602	-15.404	-0.45942	20.64475	-40.50188335
80	-60.17148151	-33.8957	2.293531	-1.89927	-13.95	-0.45059	25.41232	-37.68173567
81	-58.15605647	-31.9629	9.36223	-2.46187	-13.9266	-0.07082	24.0276	-43.1237086
82	-62.69503989	-36.0449	7.197897	-2.45073	-14.3529	-0.46341	24.43663	-41.01769853
83	-55.88277551	-34.4634	5.152108	-2.50239	-14.6482	-1.25031	25.92149	-34.0920997
84	-67.46337144	-36.3751	7.605734	-2.47724	-15.6532	-0.5715	26.38035	-46.37238016
85	-60.52138096	-31.3974	5.587189	-2.42806	-14.3679	-0.34984	21.72451	-39.28987152
86	-60.09082135	-29.6737	7.31228	-2.22101	-14.7312	-0.53242	20.6935	-40.93828074
87	-51.59311571	-29.3078	7.61455	-1.93265	-12.8917	-0.22382	22.34997	-37.20164375
88	-59.80942092	-29.5731	5.996651	-2.32707	-15.372	-0.659	23.87835	-41.7532082
89	-57.24843137	-30.8925	7.696868	-1.88864	-14.3789	-0.16469	23.40324	-41.02385993
90	-58.70557372	-27.9117	6.026272	-1.97526	-14.2744	-0.06844	21.83911	-42.34115529
91	-57.12715934	-26.8104	5.481645	-2.24717	-14.8242	-0.46136	19.84156	-38.10729209
92	-59.85221613	-30.2592	4.429928	-2.24016	-14.6019	-0.87129	21.44288	-37.75245538
93	-61.59867543	-31.1271	7.335465	-1.9294	-15.6044	-0.40456	22.45533	-42.32397874
94	-52.89599323	-27.3648	6.151766	-1.96869	-13.4938	-0.52339	21.91331	-37.61042959
95	-57.04942099	-32.3046	9.148534	-2.23817	-14.0927	-0.65755	23.68634	-40.59131504
96	-59.19693786	-33.1254	5.565287	-2.41649	-14.4848	-0.66079	25.22525	-39.29997042
97	-58.99317206	-34.7583	5.933555	-2.51648	-14.4246	-0.73504	24.97941	-37.47176226
98	-62.77680229	-36.6054	6.900656	-2.13279	-13.941	-0.57005	25.08465	-41.51294228
99	-62.93014682	-34.9535	6.762274	-2.1816	-15.0519	-0.58697	24.67281	-41.59123715
100	-60.46064927	-30.3978	5.142833	-2.23081	-13.6003	-0.31685	18.6173	-37.67497916
101	-63.06418362	-34.1854	5.566826	-1.80585	-15.0405	-1.77134	25.09149	-40.9194809
102	-61.96730297	-31.9572	6.233879	-1.98609	-16.1963	-1.91492	24.17682	-40.32349442
103	-67.78325701	-36.6192	1.72036	-1.75909	-15.5094	-1.59508	26.39451	-40.41528725
104	-58.56940399	-17.8527	4.496888	-1.71113	-16.4079	-1.48954	16.69348	-42.2985668
105	-59.18732279	-30.4902	4.017792	-2.10459	-14.5332	-1.77217	22.90773	-37.2126467
106	-65.52193087	-35.4583	3.174626	-1.72015	-15.5441	-1.74077	26.74016	-40.97337656
107	-62.22438367	-23.9679	0.758684	-1.96412	-16.7047	-1.77544	20.36466	-38.93552185
108	-67.04456399	-30.8643	2.691726	-3.08818	-14.6208	-0.73901	18.68185	-39.10584486
109	-66.94746376	-31.8244	2.724693	-3.42703	-15.4881	-1.6705	18.28618	-35.54824378
110	-54.43853861	-28.4084	4.544129	-2.837	-14.3326	-0.95976	21.18181	-33.626707
111	-62.84951394	-36.8497	4.106921	-2.10321	-15.1498	-0.66538	25.85234	-38.04067936
112	-52.41377022	-29.1547	2.993378	-2.33686	-13.3485	-0.67846	25.33146	-35.22003713
113	-41.21338398	-13.8718	4.051997	-1.23174	-13.8483	-0.98269	18.09182	-33.42258819
114	-43.36267985	-3.02227	-0.98144	-1.25388	-13.3911	-0.9776	14.73271	-38.46910747
115	-51.33109084	-22.3497	3.249846	-1.20321	-14.4739	-1.91263	21.0344	-35.67589358
116	-62.36382553	-34.5242	2.698364	-2.45281	-13.5788	-0.64036	22.96643	-36.83243904
117	-52.8918352	-31.3683	2.85229	-1.47013	-12.5742	-0.66026	23.10064	-32.77190651
118	-46.69138264	-25.5388	3.517165	-1.74975	-11.2335	-0.68256	20.91347	-31.91737049
119	-61.83781654	-31.8812	3.556126	-2.73131	-14.2213	-0.82587	22.19024	-37.92443915
120	-55.54127489	-22.1305	3.289804	-1.94351	-12.8243	-0.3816	17.23609	-38.78720732
121	-59.83367714	-30.3009	5.074743	-2.1728	-15.7964	-1.01622	23.1506	-38.77273489
122	-47.43940338	-14.598	1.461115	-1.73847	-12.1229	-1.38504	16.56806	-35.62413787
123	-57.00125589	-28.9619	5.74934	-2.58302	-13.8064	-0.57053	17.97658	-34.80535556
124	-54.03158426	-26.361	3.035763	-2.12438	-13.7547	-0.86893	17.1978	-31.15609572
125	-52.42005049	-20.9314	-0.7172	-1.93708	-12.3123	-0.05782	19.63987	-36.10410271
126	-48.14369348	-27.0982	2.826637	-1.73056	-10.0311	-1.48476	20.07271	-30.69835988
127	-54.96414497	-40.7885	4.104901	-2.2678	-12.1714	-1.01339	28.27876	-31.1067475
128	-63.10646607	-35.7135	4.139722	-2.63322	-12.6517	-0.73554	20.79855	-36.31071987
129	-72.87813309	-45.9546	4.800594	-2.75909	-16.0415	-0.73056	24.89205	-37.08506792
130	-65.50090726	-39.3094	5.819751	-2.47849	-14.6001	-0.87278	22.77304	-36.83294088
131	-59.36665348	-21.8031	1.426108	-1.93211	-14.4208	-1.85229	16.35911	-37.14358989
132	-58.49078439	-32.6795	0.74459	-2.28691	-14.1368	-1.53568	27.20356	-35.80005006
133	-62.81776507	-34.0153	1.027404	-2.10204	-14.4387	-1.60106	26.96668	-38.65476721

134	-66.64032856	-29.2916	2.125642	-2.04934	-15.3323	-1.59819	19.98915	-40.48374252
135	-63.65751633	-37.1209	1.52397	-2.37889	-14.4567	-1.20797	24.89643	-34.91348676
136	-60.51114943	-32.8217	1.592964	-1.82484	-14.073	-0.95619	25.74745	-38.17587776
137	-61.66224033	-31.4111	1.084806	-2.16543	-14.5527	-1.54091	24.44056	-37.51745888
138	-61.73839227	-34.2425	2.26092	-2.0165	-14.0345	-1.37482	23.6905	-36.02152652
139	-61.29601377	-32.6742	2.539674	-2.17388	-15.0994	-1.75852	21.65863	-33.78833251
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143	-60.51276652	-29.371	1.155526	-2.00002	-13.8192	-1.49246	24.08621	-39.07179026
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145	-60.40642189	-25.2632	-2.99939	-2.34014	-13.6424	-1.64171	24.08615	-38.60568899
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151	-58.90990022	-27.7377	3.306163	-2.45397	-14.4953	-1.51305	25.12586	-41.14195805
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154	-38.94052404	-12.4655	1.694239	-1.56784	-9.63402	-0.54703	14.80271	-31.22313605
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158	-43.18087059	-21.9354	3.446517	-2.16596	-8.80286	-0.00075	22.00146	-35.72391062
159	-46.19195377	-27.2735	3.482759	-3.08947	-9.62146	-0.0514	18.63768	-28.27659572
160	-53.32875838	-31.3582	4.051521	-3.14814	-10.8532	-0.12886	22.93235	-34.82419839
161	-54.94156041	-31.0305	2.002064	-3.12191	-10.7584	-0.14252	21.17424	-33.06461584
162	-49.86997638	-18.0405	0.620142	-2.80368	-11.2319	-0.82594	16.81755	-34.40560393
163	-51.0157395	-25.5482	1.313423	-3.42399	-10.5863	-0.41205	18.8791	-31.23772357
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165	-51.19704691	-39.2133	5.358436	-3.16127	-10.5079	-0.18067	27.54175	-31.03409346
166	-54.54228956	-26.2515	1.771776	-2.61477	-11.2387	-0.63475	20.84605	-36.42040331
167	-52.87648645	-44.2555	5.958558	-3.06931	-9.36433	-0.00679	29.01196	-31.15110205
168	-50.51456277	-33.4338	6.625619	-3.31511	-10.266	-0.72759	18.80444	-28.20213684
169	-55.37030299	-23.6391	0.350593	-2.8298	-11.9152	-0.08847	18.32284	-35.57124956
170	-53.79416084	-30.6952	2.534046	-3.52626	-9.35623	-0.00011	21.65892	-34.40933764
171	-57.4145419	-27.8778	2.114994	-4.04303	-11.2493	-0.67538	19.93538	-35.61941471
172	-53.11653973	-21.7517	0.753783	-2.63961	-12.1331	-0.15289	17.91662	-35.10960561
173	-56.87340713	-23.3888	0.906696	-3.19198	-11.1454	-0.1391	18.73314	-38.64797134
174	-53.30120813	-23.6113	1.235107	-2.90089	-11.9144	-0.39897	21.01135	-36.72202272
175	-47.44599668	-29.0525	1.930592	-2.4434	-9.84837	-0.22753	25.23739	-33.04216424
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177	-50.47244257	-33.5167	3.341284	-2.42343	-11.9728	-0.71135	27.75456	-32.94403012
178	-46.7373939	-32.53	2.655596	-2.39349	-9.44072	-0.56174	26.29365	-30.76073023
179	-51.05474838	-39.8313	2.053677	-2.60399	-9.64566	-0.49601	26.90834	-27.43981136
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181	-61.05421921	-55.7692	4.550388	-3.25462	-10.9014	-0.93297	30.86948	-25.61598782
182	-51.45485388	-25.9461	3.107014	-3.11287	-11.9385	-1.34602	19.4131	-31.63146302
183	-53.20681997	-41.5394	2.273407	-3.12514	-10.3594	-0.6844	26.25513	-26.02707053
184	-45.84911558	-31.3113	3.787775	-2.39428	-10.9259	-0.57269	22.27374	-26.70643551
185	-46.2382227	-38.1335	5.261803	-2.60675	-9.59605	-0.80344	27.23723	-27.59755734
186	-51.34292546	-26.2829	8.162194	-2.63561	-11.8674	-0.67331	20.8458	-38.89177194
187	-47.15111498	-27.0276	6.252319	-3.74767	-10.8836	-0.4978	18.01663	-29.26343091
188	-45.21341667	-18.2245	2.819607	-2.09878	-11.186	-0.11887	14.69256	-31.09747932
189	-50.32003026	-27.7183	7.617443	-4.07969	-9.91103	-0.09113	16.24878	-32.3861295
190	-49.17999867	-28.3794	6.175372	-3.62608	-9.89806	-0.62414	20.54847	-33.37619606
191	-46.84334705	-21.5617	5.237512	-1.99264	-9.64525	-0.78918	18.59473	-36.68686098
192	-54.0879389	-33.0122	7.867611	-3.41064	-11.972	-0.75578	22.21964	-35.02456512
193	-64.08877022	-31.8845	5.895051	-3.20122	-14.5732	-1.88811	20.55126	-38.98811018
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196	-49.03158222	-18.1021	3.492864	-2.80757	-12.6587	-2.13028	16.79778	-33.62354594
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198	-57.3030991	-39.9615	6.790757	-3.71954	-13.0615	-1.07799	24.15722	-30.43049351
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209	-57.3527405	-30.0705	3.846814	-2.89458	-12.8628	-2.76485	21.75487	-34.36174597
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211	-52.52075751	-25.4994	4.125704	-2.84764	-11.8523	-1.61847	17.46901	-32.29766307
212	-68.95518918	-50.1713	6.855401	-4.49506	-12.5067	-1.66112	28.8646	-35.84107028
213	-53.75841924	-17.6717	7.36797	-2.12411	-13.6242	-0.16643	16.1607	-43.70065507
214	-60.19951868	-30.4839	3.811842	-2.74459	-13.5933	-2.06925	20.1413	-35.26165698
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218	-52.36730639	-21.5241	5.232867	-2.13236	-12.2743	-0.93306	19.1691	-39.9054453
219	-58.32521373	-22.95	5.333199	-4.42392	-13.3922	-1.50255	14.97696	-36.36663918
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221	-51.30347139	-17.5633	4.122866	-2.33366	-13.6119	-0.95771	18.00748	-38.96730441
222	-56.16377527	-29.5803	6.156477	-3.37092	-13.0467	-1.55346	20.07002	-34.83894659
223	-48.90555479	-17.2695	4.945942	-2.22234	-13.2132	-0.76899	17.74187	-38.11930401
224	-55.76996201	-35.0577	5.91853	-3.09057	-11.5476	-2.18996	21.90055	-31.70323214
225	-54.93553723	-31.5141	5.643306	-3.35242	-12.6601	-1.17436	19.43456	-31.31241716
226	-48.82793376	-25.1207	4.526986	-3.28513	-12.5286	-1.28406	21.60381	-32.74017508
227	-59.65980429	-40.2615	4.497958	-2.98182	-12.9222	-1.82864	26.99306	-33.15672069
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229	-58.64504799	-27.9948	4.852407	-3.40099	-12.4186	-1.50062	19.11211	-37.29458918
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231	-59.36713734	-34.1825	5.20509	-3.08968	-13.7776	-2.01632	22.29536	-33.80150032
232	-60.97965358	-43.1797	4.361024	-3.48074	-13.0598	-3.06876	28.87626	-31.42786364
233	-62.89603786	-36.8314	4.310183	-3.40417	-14.1083	-2.51976	23.69384	-34.03645812
234	-64.00943012	-45.724	4.820357	-2.81903	-13.3606	-2.79099	30.0341	-34.16925895
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236	-52.57871975	-34.6529	3.180144	-2.72075	-13.5857	-2.67248	28.07515	-30.20215235
237	-60.13893089	-47.286	5.205969	-2.73702	-12.8186	-2.28216	32.72165	-32.94274657
238	-65.28318349	-38.1973	3.675802	-3.18218	-14.1345	-2.6305	26.5317	-37.34625548
239	-59.09846193	-41.5487	7.018114	-4.02914	-12.6738	-1.68362	27.45638	-33.63768563
240	-58.31888279	-40.2023	6.113607	-2.61187	-12.5944	-2.5968	29.43993	-35.86701829
241	-57.95439417	-31.9594	4.48372	-2.66544	-13.0471	-2.73556	22.12511	-34.15579089
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243	-54.51644042	-28.8004	3.305325	-2.4517	-13.3416	-2.71489	21.46548	-31.97864403
244	-54.13548599	-23.3074	3.423713	-2.54643	-12.8594	-2.16343	18.00015	-34.68272483
245	-54.49918562	-28.8471	7.497282	-3.30849	-13.5495	-2.26138	21.21384	-35.24384871
246	-56.45263459	-45.9854	5.21202	-2.51766	-11.9668	-2.13259	31.36315	-30.42544037
247	-52.71645293	-30.0336	4.888952	-2.86004	-13.364	-2.39422	24.80287	-33.75638485
248	-49.0758579	-18.6481	5.077982	-2.66432	-12.2347	-2.50428	16.50162	-34.60413083
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251	-53.51465022	-25.1438	7.406233	-3.15269	-13.0664	-1.63681	20.4686	-38.38981555
252	-59.06098546	-27.7894	5.859483	-3.68188	-13.5313	-2.51541	20.41707	-37.81950767
253	-57.53395652	-33.5435	8.814594	-3.14336	-13.3314	-2.46334	24.0019	-37.86882648
254	-59.65770802	-38.7969	6.539119	-3.14106	-12.1631	-1.27281	21.57759	-32.40051567
255	-60.57902358	-35.2928	7.19213	-3.98199	-13.9967	-1.7239	27.62234	-40.39808871
256	-56.13575711	-23.9332	5.099184	-2.91442	-13.571	-1.10851	19.30171	-39.00951606
257	-58.86232517	-42.6329	8.186298	-3.00004	-13.3969	-1.88351	26.53641	-32.6716695
258	-58.00541446	-30.3124	5.147694	-3.31413	-13.0267	-2.61691	20.46151	-34.34452903
259	-52.50929947	-31.5264	2.174044	-3.13752	-11.6046	-2.0786	26.74849	-33.08471319
260	-55.6455796	-37.9972	4.462424	-3.24385	-13.3825	-2.4813	26.99625	-29.99942642
261	-52.42649542	-37.2545	2.946742	-2.42196	-12.1683	-1.97382	27.98326	-29.53795273
262	-60.01857528	-36.7608	5.655162	-3.20136	-13.5186	-1.39177	23.05726	-33.85853087
263	-53.81003769	-40.3592	1.59623	-2.78868	-11.679	-1.64509	31.39741	-30.33177087
264	-58.98991498	-39.968	3.422197	-3.06284	-11.93	-1.78161	29.59096	-35.26058979
265	-55.05375281	-35.8561	4.7362	-2.9872	-12.7681	-2.09194	23.65721	-29.74380761
266	-58.1916756	-42.5792	2.271867	-3.4891	-12.181	-2.39124	32.38565	-32.20865317
267	-56.2174903	-34.9127	6.501713	-2.9883	-13.2133	-2.23614	24.26622	-33.6349045
268	-50.8321185	-20.9418	3.227655	-2.50864	-13.0224	-2.24329	21.23005	-36.57365078
269	-63.22555383	-38.7534	4.065556	-3.78286	-12.5062	-1.48988	23.39795	-34.15672919
270	-54.47895703	-30.0902	6.578703	-4.0628	-12.7366	-1.00798	20.05032	-33.2103123
271	-53.18443454	-29.2957	4.795002	-3.08844	-11.4981	-1.78443	19.41263	-31.72539094

272	-59.26542048	-34.7481	5.64105	-3.65201	-12.4417	-1.58839	20.85683	-33.33313136
273	-56.97665475	-40.6373	6.879294	-3.43135	-11.7722	-1.78406	28.86587	-35.09688868
274	-57.53429603	-34.406	6.492396	-3.55495	-12.6841	-1.2969	22.55721	-34.64192721
275	-60.2063267	-38.4204	6.896007	-3.90406	-12.1812	-1.31433	22.87254	-34.15483544
276	-58.43851403	-39.3449	5.0033	-2.98841	-11.8192	-1.87792	24.69655	-32.10801065
277	-54.75990034	-26.3888	6.141017	-3.54632	-12.155	-0.98644	18.26753	-36.09187496
278	-55.32448422	-26.435	4.326543	-2.71521	-12.3235	-0.77812	19.02254	-36.421757
279	-50.08830715	-19.3599	5.496801	-2.4094	-10.8995	-1.03528	14.83904	-36.72006441
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281	-56.45476069	-30.6273	6.30159	-3.5548	-11.5435	-1.71664	21.46115	-36.77529614
282	-53.81726236	-28.2968	4.756759	-2.92925	-12.0412	-1.65428	20.02978	-33.68221895
283	-58.21017211	-35.8607	5.302008	-3.01862	-12.2244	-1.66805	21.94234	-32.68274559
284	-53.60985208	-21.7371	5.214078	-3.03624	-12.6186	-1.14893	16.58581	-36.86893046
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287	-59.40609907	-28.6182	3.456576	-3.28806	-12.7401	-0.71118	18.73586	-36.24102858
288	-60.44003734	-32.8886	5.803046	-3.65129	-13.2831	-0.69297	20.01092	-35.73808064
289	-57.20297202	-26.7113	4.588521	-3.08746	-12.6727	-2.02939	18.41536	-35.70605236
290	-59.09335101	-28.2009	4.394174	-3.6063	-13.3338	-0.88916	18.69119	-36.14850608
291	-57.76282187	-29.1848	3.763917	-3.17396	-12.424	-1.0954	20.25309	-35.90165021
292	-59.29814718	-30.4243	6.09029	-3.58492	-13.2238	-0.7203	19.25496	-36.69008544
293	-55.29651108	-25.6466	5.010261	-3.51347	-12.7524	-0.12008	18.19585	-36.47004767
294	-65.72193078	-39.0047	6.027958	-3.25661	-13.1236	-0.4998	21.90843	-37.77357616
295	-54.0615278	-26.9655	5.756774	-2.66825	-12.1487	-0.1992	20.0474	-37.8840175
296	-54.85468327	-26.6843	4.875806	-3.14089	-11.9733	-0.14892	17.50295	-35.28601213
297	-62.50802558	-45.5756	7.934165	-3.75663	-12.9269	-0.97769	27.55381	-34.75913302
298	-54.15071167	-26.1818	6.824855	-2.78982	-12.9941	-0.45085	19.31911	-37.87807864
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331	-50.71268713	-24.1995	3.698427	-3.09187	-10.6928	-1.61293	19.63676	-34.45078802
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345	-54.75459001	-25.4197	4.568826	-3.04461	-12.3517	-0.99125	20.55135	-38.06743756
346	-55.91180379	-24.7839	4.108433	-2.72049	-13.2337	-1.92624	18.23078	-35.5867245
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350	-53.38328121	-23.5251	4.101009	-3.13615	-12.8511	-0.83522	19.05667	-36.19339461
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355	-56.51684596	-22.4277	4.377413	-2.57507	-12.3294	-1.58678	17.49261	-39.46785481
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359	-52.53333925	-28.8229	6.174398	-2.79316	-12.5125	-0.45832	19.65001	-33.77085056
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384	-62.27918895	-40.4005	3.859335	-3.21729	-12.2277	-2.13286	24.33523	-32.4954008
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394	-53.6761675	-22.3002	6.182872	-2.9181	-12.2044	-1.60929	18.28686	-39.11391807
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401	-51.9174603	-21.0806	2.666325	-2.57143	-12.3197	-1.99489	18.19347	-34.81069926
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404	-56.49371018	-21.227	4.206805	-3.47997	-13.4979	-2.29942	13.74855	-33.94481599
405	-60.54870865	-34.9795	2.564562	-3.27117	-13.1218	-1.41503	23.58329	-33.9091079
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407	-47.22272538	-11.5005	4.391777	-2.11708	-11.8545	-1.82192	13.95822	-38.27878221
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411	-54.31679166	-22.7845	6.121296	-3.22852	-13.0597	-0.57771	17.41269	-38.20035709
412	-53.14555276	-16.1221	3.699096	-2.58634	-13.241	-2.76613	16.08694	-38.21599337
413	-52.5255639	-22.5823	5.010341	-3.22293	-12.7686	-2.25295	17.62104	-34.33015538
414	-54.26663181	-16.3214	0.669594	-2.30059	-13.0239	-3.02892	13.43617	-33.6975274
415	-55.36103701	-21.0331	4.069138	-3.05091	-12.9521	-2.44042	16.81202	-36.76568256
416	-54.62102487	-19.8206	2.597351	-3.05907	-12.1987	-1.22706	14.63579	-35.54874415
417	-53.70677853	-25.9454	4.639998	-2.73803	-11.912	-2.01534	18.57504	-34.31104178
418	-46.30617389	-21.6497	4.266775	-2.20535	-12.0899	-2.05427	19.56843	-32.14214359
419	-53.83874561	-34.9197	5.983749	-3.26419	-10.4367	-1.44119	23.44976	-33.21052752
420	-54.08384398	-31.6081	3.653332	-3.38579	-11.4163	-1.29161	24.7273	-34.76264106
421	-55.01561623	-19.8271	4.096185	-3.22676	-12.9505	-1.59878	14.91736	-36.42610455
422	-51.52197072	-19.005	7.064397	-2.80609	-12.5602	-1.16561	13.82275	-36.87225688
423	-58.77657583	-25.493	5.458697	-2.77376	-13.7003	-1.52828	17.70543	-38.44537637
424	-53.24640606	-21.1678	4.260092	-2.75613	-14.08	-2.39398	15.35636	-32.46499592
425	-65.09527115	-35.5323	4.42813	-4.27809	-14.0156	-2.20569	19.18792	-32.67961874
426	-43.93062289	-19.9718	3.300568	-1.39653	-11.2166	-1.39424	17.87881	-31.13085697
427	-43.59126295	-20.2492	4.15173	-1.81036	-11.6924	-1.57565	15.25345	-27.66884924
428	-57.6255048	-30.6349	1.281066	-3.29559	-14.5206	-1.95453	17.42863	-25.92956853
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433	-46.361457	-17.9353	-0.54036	-2.42302	-10.1183	-1.07922	14.0776	-28.34290304
434	-52.68401815	-19.3748	-0.00797	-2.40883	-11.8526	-0.07909	13.39582	-32.35654745
435	-52.79864906	-25.1512	-0.02178	-2.64355	-11.6927	-0.80808	16.65489	-29.1362619
436	-49.54128245	-19.5098	1.204296	-2.46026	-10.9922	-1.50919	15.2288	-31.50289255
437	-54.44177017	-16.3227	-0.38226	-2.51669	-12.3197	-1.85341	11.62622	-32.6732379
438	-48.58412284	-14.4916	0.660081	-2.52692	-11.3086	-1.56022	14.78895	-34.14582935
439	-52.63445695	-16.9404	0.241536	-3.11419	-11.8414	-1.15184	14.13893	-33.96710871
440	-44.14167648	-20.4918	-0.89703	-2.12348	-10.1295	-1.01243	18.58823	-28.07566949
441	-55.42872516	-30.0638	7.700249	-3.58922	-12.6212	-1.09024	17.23911	-33.0036484
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443	-54.42887312	-21.5341	2.199383	-2.61426	-11.9739	-1.85129	14.25761	-32.91237923
444	-54.30914304	-22.2338	1.103291	-2.86437	-11.4665	-1.18032	14.18477	-31.85223936
445	-51.47847317	-20.445	1.024464	-2.90245	-10.2288	-0.95009	14.76066	-32.73722272
446	-50.86919127	-21.4882	2.289678	-2.30701	-11.6325	-1.09026	16.96222	-33.60312884
447	-50.87053891	-20.1917	1.86341	-2.56782	-11.1392	-0.81103	16.42131	-34.44546066
448	-51.21985258	-18.2118	-0.17897	-2.30742	-11.3861	-1.21527	14.88955	-32.80980374
449	-52.25890345	-19.2627	-0.84279	-2.1429	-12.3117	-1.00893	18.34552	-35.03546002
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453	-66.46205768	-35.7004	4.998728	-4.2881	-13.559	-1.39666	21.50607	-38.02267705
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457	-56.30956071	-36.3203	5.853782	-3.22429	-11.9875	-0.93146	25.50063	-35.20048592
458	-51.39004348	-17.6679	6.711447	-2.53758	-12.7473	-1.31612	15.61358	-39.4461145
459	-54.00158519	-24.4287	5.786957	-3.20594	-12.4966	-0.74643	16.27368	-35.18457614
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466	-55.34393514	-30.2546	4.895965	-3.27034	-12.6285	-1.27178	18.58525	-31.39991145
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475	-56.46205163	-37.2822	3.339947	-3.12847	-10.4757	-1.57919	26.14671	-33.48310159
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489	-55.07229051	-25.6458	5.76745	-2.56871	-11.6652	-1.54904	18.39834	-37.80935427
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516	-55.87341479	-21.0003	3.396653	-2.59069	-12.1036	-0.85073	15.41859	-38.14334464
517	-54.55245291	-28.4028	7.232628	-2.99097	-13.0839	-1.05426	21.50312	-37.75632955
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522	-55.93881437	-27.8209	5.866187	-3.46761	-12.5198	-1.39818	19.96852	-36.56699638
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564	-54.96975946	-22.066	3.25919	-2.64546	-12.0431	-1.2472	18.23776	-38.46502522
565	-58.16153193	-28.3094	4.349339	-2.84703	-12.5661	-1.04726	16.4921	-34.23315743
566	-58.11901302	-26.6262	3.237897	-2.92753	-11.3667	-1.87233	19.6805	-38.24459422
567	-54.25090166	-16.7695	2.073726	-2.48638	-12.5977	-1.44555	15.90149	-38.92704468
568	-59.0732581	-34.0474	4.691084	-3.28329	-12.5175	-1.30457	24.0124	-36.62392631
569	-53.39585003	-27.8193	4.71517	-3.09859	-11.3569	-1.17919	19.98111	-34.6381908
570	-52.65343992	-20.1661	6.593248	-3.13434	-12.3781	-1.30465	16.07348	-38.33700194
571	-50.82480891	-21.6952	2.818468	-3.20346	-10.7016	-1.19811	15.73094	-32.57581924
572	-57.36686399	-33.985	6.020814	-3.19585	-12.3204	-1.51266	22.24583	-34.61962505
573	-55.61291075	-19.0938	2.138261	-2.47463	-13.061	-1.56223	14.14757	-35.70716178
574	-56.52047694	-35.4763	3.196205	-3.27494	-12.0106	-1.04478	22.66434	-30.57433281
575	-56.55935581	-34.0234	2.40143	-3.19395	-11.4461	-0.72354	22.48467	-32.05841731
576	-55.52719369	-37.2812	5.93181	-3.8993	-11.084	-1.04249	23.56612	-31.718091
577	-50.99451997	-27.2032	5.57903	-3.10949	-11.6876	-0.99813	19.62426	-33.19936834
578	-56.48534245	-31.9433	3.758763	-2.77804	-12.0538	-1.57563	21.75504	-33.64837921
579	-58.07990195	-28.383	6.359162	-3.18278	-12.5772	-1.48511	18.83527	-37.64621791
580	-53.72987869	-30.4525	5.113397	-3.16711	-11.3168	-1.1295	20.76662	-33.54393225
581	-48.95474886	-36.9707	8.009467	-2.94366	-10.327	-1.37935	26.70911	-32.052545
582	-56.54930417	-32.3267	6.697047	-3.49615	-11.8629	-1.06028	20.99235	-35.49262967
583	-55.44585683	-24.4586	5.291876	-2.96181	-11.8853	-1.6627	16.8189	-36.58822778
584	-56.34748669	-29.5981	7.001698	-3.14888	-12.2819	-0.83822	20.8051	-38.28719058
585	-53.53079296	-29.8684	5.318914	-2.86646	-11.5251	-1.88713	19.40733	-32.10998896
586	-56.98716649	-30.5668	5.735998	-3.41791	-11.9342	-1.97066	18.28604	-33.11962525
587	-51.65689404	-28.6852	4.658876	-2.42638	-10.5253	-1.55207	20.14647	-33.27332207
588	-56.05839601	-29.7244	4.228363	-2.93513	-12.0156	-2.28208	19.3011	-32.63064785
589	-56.18151695	-24.5738	3.717398	-3.11635	-12.7258	-1.60855	16.23444	-34.10889864
590	-55.19414166	-29.9885	3.975605	-2.68139	-12.2722	-1.14781	21.02024	-34.10005768
591	-63.22285628	-38.0318	6.848323	-3.93574	-12.8568	-1.07081	25.4028	-39.57878741
592	-50.24136513	-17.959	0.43118	-2.68342	-11.0027	-0.57848	15.25162	-33.7005844
593	-51.44728297	-22.7749	1.233857	-3.31499	-11.6432	-0.77545	22.05421	-36.22679698
594	-51.48044593	-17.9333	2.666856	-2.81306	-12.0336	-1.77099	14.99884	-34.59516673
595	-60.53744746	-27.0435	6.616067	-4.01417	-13.7017	-0.51987	18.86905	-40.74329851
596	-52.41054093	-22.2504	2.678878	-2.66223	-11.6684	-1.46596	22.05352	-39.09590982
597	-49.92010887	-29.4029	5.744407	-3.20479	-12.3227	-1.4308	24.85736	-34.16069008
598	-52.87871293	-21.2813	3.320843	-2.25891	-12.4213	-1.23	18.28686	-37.29498009
599	-49.19452087	-23.5288	3.218192	-3.21441	-11.4175	-0.97175	23.02966	-36.30993815
600	-51.16110265	-31.8757	3.318572	-2.66763	-11.0692	-1.43926	24.18062	-31.60846097
601	-52.52470377	-29.5062	3.334792	-2.54283	-12.5176	-2.11448	21.9197	-31.09809842
602	-55.76738018	-36.7029	6.160548	-3.20108	-12.2332	-1.57654	23.26219	-31.47640889
603	-63.43388176	-47.8596	4.817773	-3.45098	-11.1761	-1.78377	27.49628	-31.47740715
604	-50.81776386	-35.69	6.251101	-3.07239	-11.7378	-1.14433	24.0072	-29.43158868
605	-50.85148886	-32.2207	3.467997	-2.66116	-10.7515	-1.05615	24.14508	-31.77499853
606	-54.1658227	-23.509	4.932355	-3.06407	-13.1254	-1.55349	16.67424	-34.5204469
607	-49.30048402	-24.6292	3.637207	-3.12139	-12.2003	-2.07	21.05209	-31.96890043
608	-50.24916422	-17.7692	3.985641	-2.68265	-12.3143	-2.86544	16.72709	-35.3303092
609	-45.75336885	-21.7352	5.078347	-2.43989	-11.7103	-1.83292	18.77029	-31.88369702
610	-47.69749042	-17.0943	5.957831	-3.09551	-11.7561	-1.57479	16.63624	-36.77085685
611	-59.94563612	-27.3779	4.476972	-3.46068	-12.2547	-0.66924	20.04904	-40.70914506
612	-54.35615244	-17.5779	3.358519	-2.78433	-11.7257	-0.74242	16.37799	-41.26228906
613	-52.54860815	-20.6945	2.136681	-2.25441	-13.0894	-1.10767	17.83015	-35.36949486
614	-52.02543808	-22.769	5.121963	-3.16855	-12.0705	-1.13506	17.13414	-35.13844337
615	-55.88048167	-29.627	6.26632	-2.99125	-12.3504	-0.70385	20.72504	-37.19928385
616	-58.49274255	-17.9548	2.998827	-3.46711	-13.4697	-2.00972	13.24119	-37.83145907

617	-55.23470769	-20.5578	3.281304	-3.07592	-12.8187	-2.16443	14.34065	-34.23978726
618	-58.75609383	-31.5987	5.096199	-3.06127	-13.1127	-1.57231	21.71764	-36.22492846
619	-56.71591166	-33.8817	4.11468	-3.59504	-12.9067	-2.01263	23.39932	-31.83381639
620	-63.00239406	-14.9889	-2.83869	-3.42688	-13.9993	-1.29459	13.94587	-40.39986326
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624	-60.89366196	-38.409	2.998183	-3.68298	-11.8907	-0.8624	22.18274	-31.22950625
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626	-51.63222446	-23.7811	4.239996	-3.16003	-13.1944	-2.15375	18.78891	-32.37177825
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633	-52.53971672	-17.242	6.451053	-3.02536	-12.5963	-1.51357	13.82458	-38.43810529
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636	-55.39407262	-23.049	4.916521	-2.76445	-13.6664	-1.93135	20.26251	-39.1619165
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638	-54.96392484	-26.6124	5.111023	-3.18415	-12.6746	-0.7991	19.84625	-36.65094528
639	-53.29795775	-14.076	3.352228	-2.88963	-13.4045	-1.29498	15.03311	-40.01821763
640	-51.12635256	-21.2634	6.125371	-2.68025	-12.8903	-0.22317	16.75621	-36.95084817
641	-54.90738506	-20.2387	4.437818	-3.43468	-11.5937	-1.44263	13.8883	-36.52380721
642	-55.9615554	-23.9067	3.564936	-2.88188	-11.466	-1.34904	17.32597	-37.24884048
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644	-52.20693534	-29.7155	7.411597	-4.39614	-11.1815	-1.05954	20.45703	-33.72287995
645	-51.16382392	-20.2499	4.278063	-2.61725	-11.4671	-1.69699	16.49997	-35.9105987
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647	-55.44370299	-26.5935	4.843261	-3.12136	-12.778	-0.87429	20.44666	-37.3664615
648	-66.3021598	-38.9778	3.998073	-3.27267	-13.13	-1.78534	23.97589	-37.1103256
649	-57.12730556	-29.2452	5.291161	-3.70962	-12.6141	-1.67364	20.79203	-35.96791429
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651	-56.32895615	-30.8559	5.09629	-3.21364	-11.4071	-1.8061	19.25939	-33.4018635
652	-56.75523208	-32.0868	6.175149	-3.65077	-12.8394	-1.78497	21.40143	-33.96988507
653	-58.39654027	-42.7941	5.591317	-3.2991	-10.5727	-1.41327	26.06871	-31.97736513
654	-53.37654011	-29.7147	4.205198	-3.35056	-12.8273	-2.40694	21.07543	-30.3576746
655	-52.25781216	-24.6815	4.954947	-3.03271	-11.8964	-1.61142	17.97425	-33.96503904
656	-58.34382013	-34.808	7.136856	-3.8107	-12.2369	-1.37963	20.79834	-34.04370995
657	-48.1402736	-24.3091	4.81266	-3.00657	-11.9285	-1.51509	20.51058	-32.70425507
658	-65.61405105	-34.9782	2.620422	-2.95328	-11.8781	-1.32136	20.84751	-37.95100609
659	-48.79063905	-19.6298	4.922077	-3.01672	-10.9422	-1.96252	17.75934	-35.9207308
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661	-55.42104016	-21.0002	4.045127	-3.03942	-13.0544	-0.64332	15.68185	-37.41065478
662	-47.55680095	-16.8548	3.810671	-1.79895	-11.4326	-1.06321	17.70311	-37.92110453
663	-53.76017056	-22.371	4.697297	-3.27791	-12.4678	-0.66554	15.69873	-35.37399247
664	-48.41009502	-29.1564	5.334796	-2.13585	-12.1677	-2.0443	17.97787	-26.21847563
665	-53.00401211	-20.1909	3.968599	-2.72367	-12.148	-1.94057	17.25019	-37.21974322
666	-56.57409509	-21.1119	3.466336	-3.05083	-12.8438	-1.13652	16.55536	-38.45277588
667	-52.06990128	-31.1809	5.542825	-2.85842	-12.0076	-0.63233	21.22899	-32.16254839
668	-53.57049692	-19.55	1.709173	-2.3061	-12.6643	-2.19367	15.15786	-33.72341834
669	-58.19420473	-23.8827	3.139181	-2.41561	-13.5325	-2.14702	17.16399	-36.51955669
670	-49.8560174	-16.2288	3.427379	-2.59956	-11.6669	-1.60201	14.92384	-36.11000863
671	-54.98901762	-33.4157	4.490779	-2.85325	-10.4566	-2.11732	22.2812	-32.91812678
672	-53.07263363	-24.7905	4.396276	-2.83725	-12.0744	-1.57388	18.69629	-34.88914579
673	-55.49513414	-26.0487	3.792642	-2.6267	-13.0979	-1.14517	19.08278	-35.45214353
674	-53.60890393	-16.4846	2.688951	-2.43931	-12.4181	-0.82955	15.57904	-39.70531411
675	-59.03311658	-26.4361	1.191937	-3.71271	-13.1028	-2.47595	17.44051	-31.93805805
676	-60.4697341	-28.8224	3.207075	-3.27076	-12.7581	-1.85031	20.20903	-37.18420078
677	-55.43560931	-27.0794	3.193575	-3.07072	-11.204	-1.88951	18.72271	-34.10819367
678	-49.65986632	-27.5785	1.273276	-2.30349	-10.4399	-1.98392	19.13346	-27.76081663
679	-55.32077239	-25.8938	5.488955	-2.84139	-13.3693	-1.7012	18.86858	-35.87258351
680	-60.15791491	-30.2356	3.719714	-3.14585	-12.9263	-1.04918	17.15496	-33.67560069
681	-61.74110731	-28.4572	7.131198	-3.59554	-13.4458	-1.50259	17.10521	-38.97632821
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683	-57.60521309	-37.4846	4.641294	-3.70837	-11.3412	-1.42395	22.92781	-31.21622583
684	-55.85010089	-34.3982	4.74797	-3.24259	-12.1755	-1.73806	19.47115	-28.51492368
685	-56.2882968	-29.1992	3.816941	-2.88373	-12.4697	-1.58697	19.59982	-33.5653824

686	-55.42846422	-27.5829	4.615098	-3.21963	-12.573	-2.03566	17.81685	-32.44927208
687	-51.25119897	-13.1968	0.88732	-2.30079	-13.1173	-1.23151	13.63468	-35.92685563
688	-44.90290366	-19.3316	2.355157	-1.72074	-11.56	-1.06668	18.76981	-32.34881309
689	-46.88733615	-18.6388	6.050868	-2.36046	-12.401	-0.55318	16.39508	-35.37989721
690	-54.08182298	-24.4062	3.693529	-2.07552	-11.5875	-2.35437	16.04488	-33.39668043
691	-56.17860322	-17.6701	0.196649	-2.28902	-12.5815	-1.70288	15.25868	-37.39040604
692	-50.09360078	-17.8856	1.853122	-2.00503	-11.3972	-2.14087	15.76857	-34.28661966
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694	-51.19112826	-16.2387	0.498034	-2.18579	-10.8237	-1.68254	13.09342	-33.85190019
695	-53.59016159	-21.2318	0.860315	-2.7707	-12.159	-1.37958	16.70484	-33.61426576
696	-51.15615632	-15.2252	1.65108	-2.10319	-11.8252	-1.16945	14.43176	-36.91595765
697	-48.25793825	-17.6444	1.874393	-1.94042	-11.5453	-1.71805	15.38885	-32.67299096
698	-51.50761957	-23.1293	0.042358	-2.70133	-10.1659	-1.45935	15.54626	-29.64040623
699	-51.8082442	-19.1564	1.339028	-2.4061	-10.9378	-1.61007	13.62581	-32.66268865
700	-49.33476569	-19.514	0.182992	-2.89927	-10.3829	-0.87375	15.15002	-30.9978646
701	-39.73398368	-12.6092	9.199702	-2.38302	-11.2	-2.2822	13.42319	-33.88246723
702	-48.50385372	-20.971	1.433437	-2.39192	-10.9565	-1.6617	15.86355	-29.81973566
703	-50.7499314	-17.9101	-0.6816	-2.03358	-11.2985	-1.58229	14.46804	-31.71194629
704	-47.57977079	-21.0005	1.68639	-2.69125	-9.46528	-1.30737	14.52307	-29.32480217
705	-53.19875439	-18.018	0.070343	-2.50198	-11.8201	-1.80717	13.13067	-32.25250002
706	-48.07240497	-21.0627	-0.80652	-2.50628	-10.2958	-1.44189	15.11071	-27.06990704
707	-44.98772066	-20.7488	1.62746	-2.591	-8.76582	-0.88831	14.9326	-28.55385111
708	-48.64605089	-18.1345	1.849537	-2.04947	-11.4679	-1.69441	15.5399	-32.68921168
709	-46.57916719	-19.7391	0.916402	-2.47797	-9.17644	-0.78722	15.40264	-30.71749007
710	-48.09145214	-19.1343	1.07046	-2.17684	-11.6833	-1.81442	17.93126	-32.2843119
711	-49.33767689	-14.8396	-0.33002	-2.0765	-11.3771	-1.72073	13.58951	-32.58314783
712	-44.75599483	-18.2834	0.007551	-2.12006	-9.75399	-0.08798	14.22812	-28.74621956
713	-47.1382648	-14.812	0.62508	-2.31325	-11.3694	-1.22584	16.23668	-34.27956025
714	-50.6847312	-21.1269	1.623609	-2.61327	-11.4146	-1.37936	16.54018	-32.31433819
715	-56.70986595	-28.2997	3.524434	-2.79261	-13.7122	-1.55461	20.16316	-34.03837986
716	-58.29482154	-29.7162	4.573593	-3.31049	-12.3428	-1.61877	17.86853	-33.74868733
717	-51.90184594	-20.0263	2.013039	-2.95185	-11.7763	-1.58429	15.24943	-32.82552649
718	-52.16875188	-24.707	3.826768	-2.29071	-11.6716	-1.60998	18.51544	-34.23165033
719	-52.26947667	-22.2862	6.229915	-2.79909	-11.9734	-1.24819	17.40098	-37.59350608
720	-57.0409181	-31.2198	3.99339	-2.77705	-12.7649	-1.74628	20.23252	-32.7587922
721	-60.41560116	-32.8633	4.120641	-2.82699	-12.6098	-2.32285	19.87181	-33.7851078
722	-55.60356149	-29.4445	3.781903	-2.839	-11.5905	-1.41462	19.84818	-33.94510365
723	-51.64485721	-31.4336	3.113513	-3.3372	-11.4497	-0.74427	18.01433	-25.80789279
724	-52.9909457	-25.0206	4.775338	-2.861	-12.5725	-1.75988	20.20618	-35.7584658
725	-60.84420838	-31.4467	6.569218	-3.14798	-12.7239	-1.77813	18.34882	-36.66556304
726	-55.62740055	-22.4949	5.336405	-2.74065	-12.66	-0.968	16.52755	-38.62787959
727	-56.46061352	-25.8831	4.361242	-3.4262	-12.8979	-1.01752	18.43329	-36.03037516
728	-48.926014	-22.976	5.544789	-2.48136	-11.8039	-1.35073	17.7494	-33.60824386
729	-54.43058036	-26.6476	6.064151	-3.39619	-12.332	-2.16443	17.85877	-33.8133414
730	-56.12380139	-24.9283	2.35243	-2.98512	-12.4384	-1.09385	17.47031	-34.50090535
731	-56.61724978	-31.0087	3.614341	-2.93657	-12.8525	-2.77366	22.29075	-32.95092334
732	-52.79909902	-30.7475	3.289929	-3.56707	-11.5858	-0.85617	18.22423	-27.55670804
733	-56.71659473	-35.8576	2.719995	-3.35062	-11.3927	-1.01702	23.25887	-31.07745873
734	-51.68932114	-23.2129	4.551048	-3.20234	-11.5487	-0.84956	17.65707	-35.08393849
735	-53.65717054	-17.5129	3.092098	-2.90931	-12.226	-1.35791	14.39036	-37.13347999
736	-62.75377695	-43.5402	5.40695	-3.18423	-12.3673	-0.80937	27.16727	-35.42692287
737	-52.47763378	-21.0075	4.755268	-3.57948	-12.4781	-1.0932	16.89554	-35.97021544
738	-56.74558699	-33.4082	2.530287	-2.24285	-11.6504	-2.02805	24.26039	-34.20678374
739	-53.22386442	-18.632	1.461642	-2.90611	-11.6951	-1.52892	16.34817	-36.27163376
740	-56.58878816	-22.2009	5.68916	-3.15362	-12.3444	-1.66582	15.86612	-38.77935892
741	-55.14090011	-31.3353	4.957243	-2.82896	-11.9031	-1.67319	20.86916	-33.22675517
742	-55.95265882	-28.6484	5.236233	-3.21522	-12.4077	-1.93027	18.77144	-33.7586486
743	-57.0761379	-34.5332	8.282243	-3.58598	-11.9928	-1.51542	22.31481	-36.04581471
744	-53.84644829	-30.4866	5.420129	-3.42664	-12.8672	-0.45874	20.71326	-32.74063689
745	-53.17815692	-14.7403	2.292251	-2.97928	-12.5173	-1.0986	14.80783	-38.94269184
746	-57.33040886	-26.8895	6.204582	-4.12755	-12.142	-1.54378	18.13857	-36.97068672
747	-46.31771901	-17.4105	6.337056	-2.23364	-12.4803	-1.50403	20.36101	-39.38734876
748	-52.153427	-21.1412	7.4401	-3.18536	-13.0075	-1.66055	18.73594	-39.33488797
749	-53.67375976	-23.5057	5.886128	-3.69136	-11.8692	-0.81547	18.23203	-37.91015695
750	-56.37583601	-29.0183	8.369407	-3.05291	-13.7442	-0.91512	21.23891	-39.2536083
751	-66.74871009	-41.0742	4.347194	-3.47752	-13.1345	-1.65418	24.54661	-36.30214265
752	-48.47411573	-17.9467	6.70939	-2.52706	-11.4253	-1.91542	17.18541	-38.554445
753	-55.70887991	-22.6515	3.902289	-2.54427	-12.9892	-1.17022	16.91913	-37.17519921
754	-58.38762939	-30.1957	5.268367	-3.49551	-13.527	-0.89713	20.0014	-35.54203112

755	-53.19825323	-28.4227	6.044291	-3.13411	-12.0206	-0.98573	19.14099	-33.82046952
756	-50.83501872	-20.3059	2.899255	-2.5819	-11.639	-2.28749	13.51645	-30.43647289
757	-57.63792591	-25.518	2.93708	-2.38428	-12.1314	-1.58034	15.99088	-34.95182093
758	-54.28904291	-16.6249	1.434009	-2.85938	-12.6384	-2.39163	15.27333	-36.48208158
759	-45.19104108	-12.9376	4.339255	-2.72983	-11.7217	-1.29983	13.25195	-34.09328653
760	-45.62329378	-15.9895	2.624624	-2.93579	-10.6484	-1.45585	16.77919	-33.99758259
761	-52.38268238	-23.906	5.479026	-2.72549	-11.9923	-1.08302	19.03037	-37.18521047
762	-55.39978936	-29.1241	6.716455	-3.47232	-12.3357	-1.3355	19.93376	-35.78235464
763	-51.15150888	-23.264	3.04466	-2.8223	-12.1725	-0.99029	18.71098	-33.65807476
764	-50.09217117	-22.569	6.247268	-2.69318	-12.2698	-1.63812	18.96103	-36.13035948
765	-50.5530458	-24.9763	6.466623	-2.42475	-11.3436	-1.20602	20.26291	-37.33187774
766	-51.00373102	-18.144	7.7937	-2.89861	-12.4333	-0.95014	16.96332	-41.33470769
767	-52.77978496	-20.4643	8.061307	-3.1784	-11.636	-1.04034	15.66366	-40.18574866
768	-53.09979253	-19.1966	5.849126	-2.54945	-11.7141	-1.14866	15.04736	-39.38742645
769	-51.6494714	-20.3124	3.565437	-3.17197	-10.8315	-0.96325	13.08435	-33.02007468
770	-49.24795378	-27.8786	6.610188	-3.12161	-12.0313	-1.17858	19.69621	-31.34431053
771	-51.93749335	-23.1388	4.715161	-2.99555	-11.758	-1.52641	16.55302	-33.78687136
772	-49.98341526	-20.8067	6.392976	-3.38028	-11.4631	-1.82965	15.50328	-34.39992488
773	-55.03096174	-21.1702	5.007143	-3.16815	-13.2238	-2.24605	15.85315	-36.08303601
774	-51.32513586	-24.0499	4.703142	-3.15156	-11.4513	-2.19515	18.03184	-33.21220185
775	-54.87424889	-24.9848	4.716448	-3.67198	-11.8511	-0.39982	15.51177	-34.19477267
776	-53.36595105	-33.1871	6.7029	-3.33869	-10.6354	-1.80968	20.9764	-32.07436436
777	-60.77221359	-30.8512	3.872728	-3.30694	-12.5994	-1.96263	19.58473	-35.50947595
778	-54.96211101	-29.8224	2.016173	-3.02088	-11.8066	-1.45968	20.94622	-31.81499159
779	-49.73980438	-33.8269	2.143302	-2.5485	-10.5093	-1.38652	25.47805	-29.08993591
780	-52.6221681	-33.5597	7.53979	-3.34157	-12.3828	-1.13633	20.39688	-30.13848697
781	-56.7965437	-35.0017	3.267099	-3.27276	-11.9696	-1.52435	22.40894	-30.70419265
782	-55.19940522	-28.5257	1.755072	-2.66981	-11.4126	-1.75588	21.34485	-33.93532872
783	-59.62680635	-36.0386	4.190727	-2.8733	-12.3205	-1.87039	22.92	-33.63474978
784	-56.88559079	-30.3802	4.587104	-3.04495	-12.1813	-2.27773	20.74039	-34.32883986
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786	-50.40134082	-26.2208	5.0185	-3.2914	-10.7867	-0.75957	17.70654	-32.0679215
787	-53.48811378	-30.4295	4.838264	-2.63448	-11.4214	-1.6167	19.34139	-31.5657587
788	-52.80763006	-31.1001	4.550425	-3.38376	-11.4748	-1.65652	22.19661	-31.93954432
789	-56.90886715	-20.3259	2.893749	-2.53432	-12.3132	-1.82111	16.38656	-39.19471441
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791	-50.42962678	-20.3241	4.892798	-2.8975	-10.912	-1.49614	15.21858	-34.91127278
792	-53.8091388	-32.4875	0.979818	-2.80341	-10.2512	-1.49021	21.85427	-29.6109557
793	-51.80637117	-21.1168	1.718087	-2.57906	-12.2885	-1.98472	17.71368	-33.26906463
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796	-61.15673231	-43.1105	3.112566	-3.05744	-12.0954	-1.79424	25.54933	-29.76109922
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799	-50.73405045	-22.377	3.525454	-3.89718	-12.4954	-0.92503	21.56682	-36.13171145
800	-51.01862555	-16.8056	3.613634	-1.99123	-11.8126	-1.80994	14.70907	-36.92196714
801	-58.42779341	-33.9767	4.469466	-3.12138	-12.3881	-1.98345	21.33131	-32.758966
802	-57.48087282	-37.4526	4.983516	-3.23254	-12.2072	-1.92412	24.60292	-32.25083349
803	-61.48974581	-42.6612	3.727818	-3.84537	-12.3137	-0.84592	23.32573	-28.87709925
804	-59.20676709	-44.7784	5.593996	-3.05123	-11.7921	-0.87269	26.21001	-30.51640475
805	-63.54352538	-42.2849	3.197122	-2.77047	-12.7755	-2.25865	25.83103	-32.48213901
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807	-57.71243505	-28.7544	2.113598	-3.20148	-12.5263	-1.59796	20.1276	-33.87344342
808	-56.03668765	-36.0395	5.971579	-3.07185	-11.1886	-0.78129	21.80514	-32.73212252
809	-57.21788919	-26.673	4.647769	-3.11666	-11.7499	-1.49979	18.18074	-37.00707233
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816	-54.49203524	-29.034	4.641192	-3.15554	-11.408	-1.07123	20.2708	-34.73523505
817	-51.70899866	-18.3521	1.886686	-3.50474	-11.3069	-1.1343	16.50021	-35.79779138
818	-50.70059928	-18.291	2.221203	-2.77521	-11.795	-2.05145	16.22853	-34.23758717
819	-50.75259083	-21.7274	3.821399	-3.78638	-11.2838	-1.40114	15.8889	-32.26423091
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824	-50.08430914	-28.8775	3.05187	-2.82866	-11.9768	-1.33393	22.92123	-31.04043613
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830	-51.51691315	-32.046	2.76828	-2.75321	-11.588	-1.75918	24.22821	-30.36699882
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838	-53.83719256	-29.0942	3.641556	-3.54717	-11.8636	-1.83537	19.86184	-31.00032329
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841	-57.56896762	-35.9488	2.800889	-3.10826	-11.9919	-2.00868	23.4185	-30.73070628
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852	-54.96578086	-26.5177	3.459292	-2.9059	-12.1359	-1.75733	18.63519	-33.74340703
853	-54.82185911	-26.2828	5.676328	-3.38419	-11.7752	-1.62404	16.29011	-33.72203267
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862	-50.94819921	-28.757	6.415835	-2.87726	-11.5183	-1.55144	20.96975	-33.62972937
863	-50.61833299	-25.7408	3.64907	-2.69672	-11.7629	-1.53729	21.38048	-33.91020157
864	-58.56662327	-42.7563	4.349428	-2.71489	-12.4063	-0.84927	28.93257	-33.12189376
865	-52.11819522	-19.1796	1.705196	-2.56708	-12.5562	-2.27874	16.81068	-34.05241892
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867	-48.53739333	-15.9485	3.947553	-2.39641	-12.7967	-2.22873	16.01095	-35.12552674
868	-51.1907292	-22.2375	4.137157	-2.46838	-13.3855	-2.37891	22.53718	-37.39480471
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870	-57.8759825	-39.9938	4.842384	-3.40852	-11.5681	-1.1525	28.04023	-34.63570215
871	-54.50338641	-30.3664	7.178643	-3.72204	-11.449	-1.17193	18.87358	-33.84623657
872	-50.14443811	-26.7007	5.068803	-2.32629	-11.8354	-1.214	20.70628	-33.84320073
873	-53.68056791	-27.2127	6.395266	-2.52904	-12.959	-1.32223	20.64002	-36.69286379
874	-58.78240046	-25.9432	3.379514	-3.58365	-13.2834	-0.91345	15.96489	-34.40311583
875	-56.01082174	-22.6462	3.600767	-3.08812	-12.498	-2.44893	16.43897	-35.36930701
876	-51.96804159	-14.5671	1.789654	-2.42865	-11.8056	-1.4219	14.27758	-37.81208951
877	-56.43197415	-25.645	4.364784	-3.01744	-12.5656	-2.00219	20.54442	-38.11095952
878	-55.72773849	-25.6241	3.569893	-3.21403	-13.1658	-1.55461	19.87644	-35.61552029
879	-53.71686397	-33.2172	4.383645	-2.49407	-11.5312	-1.09296	22.77605	-32.54111619
880	-54.07609604	-35.1257	2.263443	-2.90814	-11.4377	-1.26702	23.94068	-29.54158872
881	-55.36603516	-31.2967	3.944582	-3.22355	-12.6184	-1.85866	23.3378	-33.65113227
882	-56.95913492	-41.828	4.616868	-3.37137	-10.7026	-1.20038	25.6814	-30.15504993
883	-48.86656142	-30.2977	2.660265	-2.88961	-11.1049	-1.17375	23.14617	-29.20702879
884	-53.83002898	-21.5618	1.466991	-3.7222	-12.4125	-2.17413	18.06286	-33.48921533
885	-58.87378184	-33.8221	4.568892	-3.48727	-11.9276	-1.55077	19.5014	-32.15630058
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887	-55.96918607	-30.8951	5.74236	-2.77107	-12.544	-0.90691	20.96633	-35.5607088
888	-59.06563503	-37.0489	3.630001	-3.1207	-11.5605	-2.22123	22.58994	-31.33420377
889	-55.32927922	-26.3	5.742276	-3.40709	-12.6605	-0.81533	18.29082	-36.17954521
890	-55.3547507	-26.9415	4.551023	-3.06678	-12.6372	-2.44309	18.84875	-33.66600407
891	-57.65534651	-33.861	4.140101	-3.11885	-11.9702	-0.63847	23.13798	-35.34494464
892	-55.57795362	-30.8392	5.063836	-3.23293	-11.4788	-1.5304	21.69478	-35.25515725

893	-57.21498115	-42.3885	5.928483	-3.26823	-12.6603	-1.13815	27.64958	-31.33787611
894	-53.0838914	-19.1856	1.962168	-2.75274	-12.1243	-0.82646	16.44542	-36.60238528
895	-53.89452432	-28.5483	1.933938	-3.41187	-10.8458	-1.89465	20.42449	-31.55236567
896	-55.61019457	-26.962	4.956079	-2.80704	-12.732	-0.72883	20.20594	-37.54236207
897	-49.51743781	-24.0982	3.655157	-2.70651	-11.7278	-0.99132	20.99729	-34.64605159
898	-53.71604874	-28.5047	4.85776	-2.92564	-12.532	-1.56316	22.51646	-35.56471014
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900	-58.22192544	-36.382	3.69268	-3.75437	-11.4453	-1.85182	22.14781	-30.62896854
901	-61.87851222	-45.2897	2.066945	-3.07578	-12.3892	-1.61761	27.73229	-29.30538507
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903	-60.66020645	-37.6818	2.651019	-3.7669	-12.1975	-2.22691	19.63052	-27.06869342
904	-62.68816934	-48.0312	3.238463	-3.31985	-12.4524	-2.41241	29.6106	-29.32145903
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906	-47.01871541	-22.8214	5.340623	-3.03995	-12.1369	-1.12144	25.28577	-38.52541391
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908	-55.88088609	-31.3182	4.308479	-2.93521	-11.9461	-1.81336	19.67184	-31.84834059
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910	-61.15070892	-35.2545	3.776259	-3.63458	-12.8273	-1.62438	19.47975	-31.06595094
911	-48.75289069	-31.2856	3.749664	-3.07616	-11.0596	-0.35155	22.41757	-29.14714623
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916	-62.57133258	-46.4966	4.001158	-3.20034	-11.9089	-0.99721	28.53319	-32.50270458
917	-63.7723204	-49.6233	3.550591	-2.86025	-11.658	-0.93755	30.6649	-32.90864113
918	-61.35647702	-48.1359	3.810195	-2.76262	-11.3135	-2.25586	31.12606	-31.82493041
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923	-54.87296913	-36.4643	7.44435	-3.47713	-12.1025	-0.5191	20.88667	-30.64096673
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926	-59.42578878	-37.3608	5.019315	-2.90793	-13.4191	-1.51646	25.00899	-34.24976481
927	-55.07005698	-21.7714	3.506625	-2.41849	-12.771	-1.38661	15.78509	-36.01424637
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972	-53.73992361	-18.716	6.399614	-2.83323	-12.6948	-0.68922	17.74332	-42.94962776
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974	-54.26051087	-28.9145	5.68124	-3.20962	-12.7003	-0.92877	19.74975	-33.93829157
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981	-54.64972224	-19.9352	7.165636	-2.97543	-11.8006	-0.76473	15.7219	-42.06129071
982	-47.36703034	-22.7233	6.163029	-3.17595	-10.487	-0.66882	17.8244	-34.29939996
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988	-56.25380973	-26.3767	2.804949	-2.68107	-12.4274	-0.86749	18.4738	-35.17986704
989	-53.48941777	-20.2744	3.497884	-3.39898	-12.6484	-1.16453	18.27466	-37.77570466
990	-52.13516244	-27.0034	5.967426	-3.46356	-12.3014	-0.85547	20.27289	-34.75172077
991	-56.02268291	-34.3913	6.363438	-3.77171	-13.0902	-0.66118	23.80101	-34.27273923
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993	-55.70042546	-20.2785	3.568876	-3.15815	-12.1006	-0.94042	15.02434	-37.81592259
994	-57.14557905	-21.2932	3.214172	-2.74032	-12.5609	-1.45718	14.65046	-36.95862509
995	-59.50658922	-20.9779	0.966057	-3.32301	-12.5442	-1.73724	15.72492	-37.61518187
996	-52.5985009	-16.3507	2.329359	-2.23599	-12.2956	-1.79862	15.22512	-37.47204161
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998	-50.27290152	-20.9339	5.564217	-3.13918	-11.9563	-1.00806	14.72028	-33.51994397
999	-57.74439065	-28.7813	4.905231	-3.14932	-13.1339	-0.6392	18.35017	-35.29606293
1000	-62.82058275	-44.6833	4.679633	-2.81981	-12.4891	-1.67565	29.38022	-35.21253486
Avg	-55.15049446	-28.0399	4.328937	-2.8942	-12.4532	-1.38528	20.40283	-35.10969324
Std	4.753032581	7.596829	1.929644	0.53265	1.127093	0.637593	3.916594	3.275996427
Max	-72.87813309	-55.7692	-2.99939	-4.49506	-16.7047	-3.14921	11.62622	-46.37238016
Min	-38.19915703	-3.02227	9.581701	-1.20321	-8.76582	-0.00011	32.72165	-25.61598782