

T (K)	$\Omega_{\{ce\}} (s^{-1})$	$\Omega_{\{ci\}} (s^{-1})$	$(\omega_{\{pi\}}/\omega_{\{pe\}})^2$	$z (\omega_{\{pe\}}/c)$	$\mu/T_{\{e\}}$	$\mu/T_{\{i\}}$	$S(z)/S(0)$
1000.0	5300000000.0	29000000.0	0.001	0.0	-44.8	-56.1	1.0
1030.3030303030303	53676767676.76768	29383838.383838385	0.001090909090909091	0.010101010101010102	-44.82121212121212	-56.121212121212125	0.9782993596892511
1060.6060606060605	54353535353.535355	29767676.767676767	0.0011818181818181819	0.020202020202020204	-44.84242424242424	-56.14242424242424	0.9570677315679407
1090.909090909091	55030303030.30303	30151515.151515152	0.0012727272727272728	0.030303030303030304	-44.86363636363636	-56.163636363636364	0.9362950204030884
1121.2121212121212	55707070707.07071	30535353.535353534	0.0013636363636363637	0.04040404040404041	-44.88484848484848	-56.18484848484849	0.9159713473796283
1151.5151515151515	56383838383.83839	30919191.91919192	0.0014545454545454547	0.05050505050505051	-44.906060606060606	-56.20606060606061	0.8960870454763425
1181.8181818181818	57060606060.606064	31303030.303030305	0.0015454545454545456	0.06060606060606061	-44.92727272727272	-56.22727272727273	0.8766326549408195
1212.121212121212	57737373737.37373	31686868.686868686	0.0016363636363636363	0.07070707070707072	-44.948484848484846	-56.24848484848485	0.8575989188612141
1242.4242424242425	58414141414.14141	32070707.07070707	0.0017272727272727275	0.08080808080808081	-44.96969696969697	-56.26969696969697	0.8389767788326568
1272.7272727272727	59090909090.90909	32454545.454545453	0.0018181818181818182	0.09090909090909091	-44.990909090909085	-56.29090909090909	0.8207573707162268
1303.030303030303	59767676767.676765	32838383.83838384	0.0019090909090909093	0.10101010101010102	-45.01212121212121	-56.31212121212121	0.8029320204884587
1333.3333333333335	60444444444.44444	33222222.222222224	0.002	0.11111111111111112	-45.03333333333333	-56.33333333333336	0.7854922401794089
1363.6363636363635	61121212121.21212	33606060.60606061	0.002090909090909091	0.12121212121212122	-45.054545454545455	-56.35454545454546	0.7684297238973606
1393.939393939394	61797979797.9798	33989898.98989899	0.002181818181818182	0.13131313131313133	-45.07575757575757	-56.375757575757575	0.7517363439382938
1424.2424242424242	62474747474.747475	34373737.37373737	0.0022727272727272726	0.14141414141414144	-45.096969696969694	-56.3969696969697	0.7354041469782899
1454.5454545454545	63151515151.51515	34757575.75757576	0.0023636363636363638	0.15151515151515152	-45.11818181818182	-56.41818181818182	0.719425350347091
1484.848484848485	63828282828.28283	35141414.14141414	0.002454545454545455	0.16161616161616163	-45.13939393939393	-56.43939393939394	0.703792338381068
1515.151515151515	64505050505.05051	35525252.52525252	0.0025454545454545456	0.17171717171717174	-45.16060606060606	-56.46060606060606	0.6884976588538988
1545.4545454545455	65181818181.81818	35909090.90909091	0.0026363636363636363	0.18181818181818182	-45.18181818181818	-56.481818181818184	0.6735340194832916
1575.7575757575758	65858585858.58586	36292929.29292929	0.0027272727272727275	0.19191919191919193	-45.203030303030303	-56.50303030303031	0.6588942845121298
1606.060606060606	66535353535.35353	36676767.67676768	0.0028181818181818186	0.20202020202020204	-45.22424242424242	-56.52424242424242	0.6445714713624492
1636.3636363636365	67212121212.12121	37060606.06060606	0.0029090909090909093	0.21212121212121213	-45.24545454545454	-56.54545454545455	0.6305587473606933
1666.6666666666667	67888888888.888885	37444444.44444445	0.003	0.22222222222222224	-45.266666666666666	-56.56666666666667	0.6168494265327277

T (K)	$\Omega_{ce}$ (s <sup>-1</sup> )	$\Omega_{ci}$ (s <sup>-1</sup> )	$(\omega_{pi}/\omega_{pe})^2$	$z (\omega_{pe}/c)$	$\mu/T_e$	$\mu/T_i$	$S(z)/S(0)$
1696.969696969697	68565656565.65656	37828282.828282826	0.003090909090909091	0.23232323232323235	-45.28787878787878	-56.58787878787879	0.6034369664671295

1727.2727272727273	69242424242.42424	38212121.21212121	0.0031818181818182	0.242424242424243	-45.309090909090905	-56.60909090909091	0.5903149652452941
1757.5757575757575	69919191919.19193	38595959.5959596	0.0032727272727273	0.25252525252525254	-45.33030303030303	-56.63030303030303	0.5774771584369416
1787.878787878788	70595959595.9596	38979797.97979798	0.0033636363636364	0.26262626262626265	-45.35151515151515	-56.651515151515156	0.5649174161596285
1818.1818181818182	71272727272.72726	39363636.36363636	0.0034545454545455	0.2727272727272726	-45.37272727272727	-56.67272727272727	0.5526297402009063
1848.4848484848485	71949494949.49495	39747474.74747475	0.00354545454545456	0.2828282828282829	-45.39393939393939	-56.693939393939395	0.5406082612017913
1878.787878787879	72626262626.26262	40131313.13131313	0.0036363636363637	0.29292929292929293	-45.415151515151514	-56.71515151515152	0.5288472359002465
1909.090909090909	73303030303.0303	40515151.515151516	0.00372727272727275	0.30303030303030304	-45.43636363636364	-56.73636363636364	0.517341044433397
1939.3939393939395	73979797979.79797	40898989.8989899	0.00381818181818187	0.31313131313131315	-45.45757575757575	-56.75757575757576	0.5060841876972321
1969.6969696969697	74656565656.56566	41282828.28282829	0.0039090909090909	0.32323232323232326	-45.47878787878788	-56.77878787878788	0.49507128476257317
2000.0	75333333333.33333	41666666.66666664	0.004	0.3333333333333337	-45.5	-56.800000000000004	0.48429707034611025
2030.3030303030303	76010101010.10101	42050505.05050505	0.004090909090909091	0.3434343434343435	-45.521212121212116	-56.82121212121212	0.47375639233533967
2060.606060606061	76686868686.86868	42434343.434343435	0.004181818181818182	0.3535353535353536	-45.54242424242424	-56.842424242424244	0.4634442093662545
2090.909090909091	77363636363.63635	42818181.81818182	0.00427272727272735	0.36363636363636365	-45.56363636363636	-56.86363636363637	0.453355588452672
2121.212121212121	78040404040.40404	43202020.2020202	0.0043636363636364	0.37373737373737376	-45.584848484848486	-56.88484848484849	0.4434857026660953
2151.5151515151515	78717171717.17172	43585858.58585858	0.0044545454545455	0.38383838383838387	-45.606060606060606	-56.906060606060606	0.4338298288650416
2181.818181818182	79393939393.93939	43969696.96969697	0.0045454545454545	0.393939393939394	-45.627272727272725	-56.92727272727273	0.42438334547278167
2212.121212121212	80070707070.70706	44353535.353535354	0.0046363636363636	0.4040404040404041	-45.64848484848485	-56.94848484848485	0.415141730302465
2242.4242424242425	80747474747.47475	44737373.73737374	0.00472727272727275	0.4141414141414142	-45.669696969696965	-56.96969696969697	0.4061005584286227
2272.727272727273	81424242424.24242	45121212.121212125	0.0048181818181819	0.42424242424242425	-45.69090909090909	-56.99090909090909	0.3972555001040638
2303.030303030303	82101010101.0101	45505050.5050505	0.00490909090909091	0.43434343434343436	-45.71212121212121	-57.012121212121215	0.3886023187211993
2333.3333333333335	82777777777.77777	45888888.88888889	0.005	0.4444444444444445	-45.733333333333334	-57.03333333333334	0.38013686881685194
2363.636363636364	83454545454.54546	46272727.27272727	0.005090909090909091	0.4545454545454546	-45.75454545454545	-57.054545454545455	0.37185509411962603
2393.939393939394	84131313131.31313	46656565.65656565	0.005181818181818182	0.4646464646464647	-45.775757575757574	-57.07575757575758	0.3637530256389342
2424.242424242424	84808080808.08081	47040404.04040404	0.00527272727272735	0.4747474747474748	-45.7969696969697	-57.0969696969697	0.35582677979479554

1727.2727272727273	69242424242.42424	38212121.21212121	0.0031818181818182	0.242424242424243	-45.309090909090905	-56.60909090909091	0.5903149652452941
2454.5454545454545	85484848484.84848	47424242.42424242	0.0053636363636364	0.484848484848486	-45.81818181818181	-57.11818181818182	0.3480725565875385

2484.848484848485	86161616161.61615	47808080.80808081	0.005454545454545455	0.494949494949495	-45.839393939393936	-57.13939393939394	0.34048663780656163
2515.151515151515	86838383838.38383	48191919.19191919	0.005545454545454546	0.5050505050505051	-45.86060606060606	-57.160606060606064	0.33306538527732005
2545.4545454545455	87515151515.15152	48575757.57575758	0.005636363636363636	0.5151515151515152	-45.88181818181818	-57.18181818181819	0.32580523914572745
2575.757575757576	88191919191.91919	48959595.95959596	0.005727272727272725	0.5252525252525253	-45.903030303030303	-57.203030303030303	0.3187027161991773
2606.060606060606	88868686868.68686	49343434.34343434	0.005818181818181819	0.5353535353535354	-45.92424242424242	-57.224242424242426	0.31175440822340417
2636.3636363636365	89545454545.45454	49727272.72727273	0.00590909090909091	0.5454545454545455	-45.945454545454545	-57.24545454545455	0.30495698039442454
2666.666666666667	90222222222.22223	50111111.11111111	0.006	0.5555555555555556	-45.966666666666666	-57.266666666666666	0.2983071697048116
2696.969696969697	90898989898.9899	50494949.49494949	0.006090909090909091	0.5656565656565657	-45.987878787878785	-57.28787878787879	0.2918017834235709
2727.272727272727	91575757575.75757	50878787.87878785	0.006181818181818182	0.5757575757575758	-46.00909090909091	-57.30909090909091	0.2854376975889074
2757.575757575758	92252525252.52524	51262626.26262626	0.006272727272727274	0.5858585858585859	-46.03030303030303	-57.330303030303035	0.2792118555331802
2787.878787878788	92929292929.29292	51646464.64646464	0.006363636363636364	0.595959595959596	-46.05151515151515	-57.35151515151515	0.2731212664393617
2818.181818181818	93606060606.06061	52030303.03030303	0.006454545454545455	0.6060606060606061	-46.07272727272727	-57.372727272727275	0.2671630039283332
2848.4848484848485	94282828282.82828	52414141.41414142	0.006545454545454546	0.6161616161616162	-46.093939393939394	-57.3939393939394	0.2613342046763573
2878.787878787879	94959595959.59595	52797979.7979798	0.006636363636363637	0.6262626262626263	-46.11515151515151	-57.415151515151514	0.25563206706208885
2909.090909090909	95636363636.36363	53181818.18181818	0.006727272727272728	0.6363636363636365	-46.13636363636363	-57.43636363636364	0.2500538498424927
2939.3939393939395	96313131313.13132	53565656.565656565	0.006818181818181819	0.6464646464646465	-46.157575757575756	-57.45757575757576	0.24459687085705623
2969.69696969697	96989898989.89899	53949494.94949495	0.00690909090909091	0.6565656565656566	-46.17878787878788	-57.478787878787884	0.23925850575969274
3000.0	97666666666.66666	54333333.33333333	0.007	0.6666666666666667	-46.199999999999996	-57.5	0.23403618677774687
3030.3030303030305	98343434343.43434	54717171.71717171	0.007090909090909091	0.6767676767676768	-46.22121212121212	-57.52121212121212	0.22892740149752577
3060.6060606060605	99020202020.20203	55101010.1010101	0.0071818181818181824	0.686868686868687	-46.24242424242424	-57.54242424242425	0.22392969167579055
3090.909090909091	99696969696.9697	55484848.484848484	0.007272727272727274	0.696969696969697	-46.263636363636365	-57.56363636363636	0.21904065207665646
3121.2121212121215	100373737373.73737	55868686.86868687	0.007363636363636364	0.7070707070707072	-46.28484848484848	-57.584848484848486	0.2142579293333601
3151.5151515151515	10105050505.50504	56252525.252525255	0.007454545454545455	0.7171717171717172	-46.306060606060605	-57.60606060606061	0.2095792208343648
3181.818181818182	101727272727.27272	56636363.63636364	0.007545454545454546	0.7272727272727273	-46.32727272727273	-57.62727272727273	0.20500227363328566

2484.848484848485	86161616161.61615	47808080.80808081	0.0054545454545455	0.494949494949495	-45.839393939393936	-57.13939393939394	0.34048663780656163
3212.121212121212	102404040404.0404	57020202.02020202	0.0076363636363637	0.7373737373737375	-46.348484848484844	-57.64848484848485	0.20052488338212712

3242.42424242425	103080808080.80807	57404040.4040404	0.0077272727272728	0.7474747474747475	-46.36969696969697	-57.66969696969697	0.19614489328733714
3272.727272727273	103757575757.57574	57787878.78787879	0.0078181818181818	0.7575757575757577	-46.39090909090909	-57.690909090909095	0.19186019308819025
3303.030303030303	104434343434.34343	58171717.17171717	0.00790909090909091	0.7676767676767677	-46.41212121212121	-57.71212121212122	0.18766871805702773
3333.3333333333335	105111111111.11111	58555555.55555555	0.008	0.7777777777777778	-46.43333333333333	-57.73333333333334	0.18356844802088396
3363.636363636364	105787878787.87878	58939393.93939394	0.008090909090909091	0.787878787878788	-46.45454545454545	-57.75454545454546	0.17955740640404805
3393.939393939394	106464646464.64645	59323232.32323232	0.008181818181818182	0.797979797979798	-46.47575757575758	-57.77575757575758	0.1756336592911133
3424.242424242425	107141414141.41414	59707070.70707071	0.008272727272727274	0.8080808080808082	-46.49696969696969	-57.7969696969697	0.17179531451007543
3454.545454545455	107818181818.18182	60090909.09090909	0.008363636363636365	0.8181818181818182	-46.518181818181816	-57.81818181818182	0.16804052073505718
3484.848484848485	108494949494.9495	60474747.47474748	0.008454545454545454	0.8282828282828284	-46.53939393939394	-57.83939393939394	0.16436746660823645
3515.1515151515155	109171717171.71716	60858585.85858586	0.008545454545454547	0.8383838383838385	-46.56060606060606	-57.86060606060607	0.16077437988057144
3545.4545454545455	109848484848.48483	61242424.24242424	0.008636363636363636	0.8484848484848485	-46.58181818181818	-57.88181818181818	0.15725952657092124
3575.757575757576	110525252525.25252	61626262.62626262	0.008727272727272728	0.8585858585858587	-46.603030303030303	-57.903030303030306	0.15382121014316993
3606.060606060606	111202020202.0202	62010101.010101005	0.008818181818181819	0.8686868686868687	-46.624242424242425	-57.92424242424243	0.15045777070097002
3636.3636363636365	111878787878.78787	62393939.39393939	0.008909090909090908	0.8787878787878789	-46.64545454545454	-57.945454545454545	0.14716758419972975
3666.666666666667	112555555555.55554	62777777.77777776	0.009000000000000001	0.8888888888888889	-46.666666666666664	-57.96666666666667	0.14394906167547758
3696.969696969697	113232323232.32323	63161616.16161616	0.00909090909090909	0.8989898989898991	-46.68787878787879	-57.98787878787879	0.14080064849024163
3727.2727272727275	113909090909.09091	63545454.54545455	0.009181818181818183	0.9090909090909092	-46.70909090909091	-58.009090909090915	0.1377208235935942
3757.5757575757575	114585858585.85858	63929292.92929293	0.009272727272727273	0.9191919191919192	-46.73030303030303	-58.03030303030303	0.13470809880001583
3787.878787878788	115262626262.62625	64313131.31313131	0.009363636363636366	0.9292929292929294	-46.75151515151515	-58.051515151515154	0.13176101808174043
3818.1818181818185	115939393939.39394	64696969.696969695	0.009454545454545455	0.9393939393939394	-46.77272727272727	-58.07272727272728	0.12887815687675294
3848.4848484848485	116616161616.16162	65080808.08080808	0.009545454545454548	0.9494949494949496	-46.79393939393939	-58.093939393939394	0.12605812141161515
3878.787878787879	117292929292.92929	65464646.464646466	0.009636363636363637	0.9595959595959597	-46.81515151515151	-58.11515151515152	0.123299548038803
3909.090909090909	117969696969.69696	65848484.848484844	0.009727272727272727	0.9696969696969697	-46.836363636363636	-58.13636363636364	0.12060110258824737
3939.3939393939395	118646464646.46463	66232323.23232323	0.00981818181818182	0.9797979797979799	-46.85757575757576	-58.15757575757576	0.11796147973277296

3242.4242424242425	103080808080.80807	57404040.4040404	0.0077272727272728	0.7474747474747475	-46.36969696969697	-57.66969696969697	0.19614489328733714
3969.69696969697	119323232323.23232	66616161.616161615	0.0099090909090909	0.98989898989899	-46.8787878787875	-58.178787878788	0.11537940236714081



4000.0	120000000000.0	67000000.0	0.01	1.0	-46.9	-58.2	0.11285362100040228
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