APPENDIX C

Properties of Steam
(SI units)

Table C.1 Saturated Steam (Temperature)

TABLE C.1 Saturated Steam: Temperature Table

$t(°C)$	P bar	ρ_l kg/m³	ρ_g kg/m³	h_l kJ/kg	h_g kJ/kg	Δh_{lg} kJ/kg	s_l kJ/kg-K	s_g kJ/kg-K	Δs_{lg} kJ/kg-K	v_l (m³/kg ×10³)	v_g (m³/kg ×10³)
0.01	0.0061173	999.78	0.004855	0.00	2500.5	2500.5	0.00000	9.1541	9.1541	1.00022	205990
1	0.0065716	999.85	0.005196	4.18	2502.4	2498.2	0.01528	9.1277	9.1124	1.00015	192440
2	0.0070605	999.90	0.005563	8.40	2504.2	2495.8	0.03064	9.1013	9.0707	1.00010	179760
3	0.0075813	999.93	0.005952	12.61	2506.0	2493.4	0.04592	9.0752	9.0292	1.00007	168020
4	0.0081359	999.95	0.006364	16.82	2507.9	2491.1	0.06112	9.0492	8.9881	1.00005	157130
5	0.0087260	999.94	0.006802	21.02	2509.7	2488.7	0.07626	9.0236	8.9473	1.00006	147020
6	0.0093537	999.92	0.007265	25.22	2511.5	2486.3	0.09133	8.9981	8.9068	1.00008	137650
7	0.0100209	999.89	0.007756	29.42	2513.4	2484.0	0.10633	8.9729	8.8666	1.00011	128940
8	0.0107297	999.84	0.008275	33.61	2515.2	2481.6	0.12127	8.9479	8.8266	1.00016	120850
9	0.0114825	999.77	0.008824	37.80	2517.1	2479.3	0.13615	8.9232	8.7870	1.00023	113320
10	0.012281	999.69	0.009405	41.99	2518.9	2476.9	0.15097	8.8986	8.7477	1.00031	106320
11	0.013129	999.60	0.010019	46.18	2520.7	2474.5	0.16573	8.8743	8.7086	1.00040	99810
12	0.014027	999.49	0.010668	50.36	2522.6	2472.2	0.18044	8.8502	8.6698	1.00051	93740
13	0.014979	999.37	0.011353	54.55	2524.4	2469.8	0.19509	8.8263	8.6313	1.00063	88090
14	0.015988	999.24	0.012075	58.73	2526.2	2467.5	0.20969	8.8027	8.5930	1.00076	82810
15	0.017056	999.09	0.012837	62.92	2528.0	2465.1	0.22424	8.7792	8.5550	1.00091	77900
16	0.018185	998.93	0.013641	67.10	2529.9	2462.8	0.23873	8.7560	8.5173	1.00107	73310
17	0.019380	998.76	0.014488	71.28	2531.7	2460.4	0.25317	8.7330	8.4798	1.00124	69020
18	0.020644	998.58	0.015380	75.47	2533.5	2458.1	0.26757	8.7101	8.4426	1.00142	65020
19	0.021979	998.39	0.016319	79.65	2535.3	2455.7	0.28191	8.6875	8.4056	1.00161	61280
20	0.023388	998.19	0.017308	83.84	2537.2	2453.3	0.29621	8.6651	8.3689	1.00182	57778
21	0.024877	997.97	0.018347	88.02	2539.0	2451.0	0.31045	8.6428	8.3324	1.00203	54503
22	0.026447	997.75	0.019441	92.20	2540.8	2448.6	0.32465	8.6208	8.2962	1.00226	51438
23	0.028104	997.52	0.020590	96.39	2542.6	2446.2	0.33880	8.5990	8.2602	1.00249	48568
24	0.029850	997.27	0.021797	100.57	2544.5	2443.9	0.35290	8.5773	8.2244	1.00274	45878
25	0.031691	997.02	0.023065	104.75	2546.3	2441.5	0.36696	8.5558	8.1889	1.00299	43357
26	0.033629	996.75	0.024395	108.94	2548.1	2439.2	0.38096	8.5346	8.1536	1.00326	40992
27	0.035670	996.48	0.025791	113.12	2549.9	2436.8	0.39492	8.5135	8.1185	1.00353	38773
28	0.037818	996.20	0.027255	117.30	2551.7	2434.4	0.40884	8.4926	8.0837	1.00381	36690
29	0.040078	995.91	0.028791	121.49	2553.5	2432.0	0.42271	8.4718	8.0491	1.00411	34734
30	0.042455	995.61	0.030399	125.67	2555.3	2429.7	0.43653	8.4513	8.0147	1.00441	32896
31	0.044953	995.30	0.032084	129.85	2557.1	2427.3	0.45031	8.4309	7.9806	1.00472	31168
32	0.047578	994.99	0.033849	134.04	2559.0	2424.9	0.46404	8.4107	7.9466	1.00504	29543
33	0.050335	994.66	0.035696	138.22	2560.8	2422.5	0.47772	8.3906	7.9129	1.00537	28014
34	0.053229	994.33	0.037629	142.40	2562.6	2420.2	0.49137	8.3708	7.8794	1.00570	26575
35	0.056267	993.99	0.039650	146.59	2564.4	2417.8	0.50496	8.3511	7.8461	1.00605	25220
36	0.059454	993.64	0.041764	150.77	2566.2	2415.4	0.51851	8.3315	7.8130	1.00640	23944
37	0.062795	993.28	0.043973	154.95	2568.0	2413.0	0.53202	8.3122	7.7802	1.00676	22741
38	0.066298	992.92	0.046281	159.14	2569.8	2410.6	0.54549	8.2930	7.7475	1.00713	21607
39	0.069969	992.55	0.048691	163.32	2571.6	2408.2	0.55891	8.2739	7.7150	1.00751	20538
40	0.073814	992.17	0.05121	167.50	2573.4	2405.9	0.57228	8.2550	7.6828	1.00789	19528
41	0.077840	991.78	0.05383	171.69	2575.2	2403.5	0.58562	8.2363	7.6507	1.00829	18576
42	0.082054	991.39	0.05657	175.87	2576.9	2401.1	0.59891	8.2177	7.6188	1.00869	17676
43	0.086464	990.99	0.05943	180.05	2578.7	2398.7	0.61216	8.1993	7.5872	1.00909	16826
44	0.091076	990.58	0.06241	184.23	2580.5	2396.3	0.62537	8.1810	7.5557	1.00951	16023
45	0.095898	990.17	0.06552	188.42	2582.3	2393.9	0.63853	8.1629	7.5244	1.00993	15263
46	0.100938	989.74	0.06875	192.60	2584.1	2391.5	0.65166	8.1450	7.4933	1.01036	14545
47	0.106205	989.32	0.07212	196.78	2585.9	2389.1	0.66474	8.1271	7.4624	1.01080	13866
48	0.111706	988.88	0.07563	200.96	2587.6	2386.7	0.67778	8.1094	7.4317	1.01124	13222
49	0.117449	988.44	0.07928	205.14	2589.4	2384.3	0.69078	8.0919	7.4011	1.01170	12614
50	0.12344	987.99	0.08308	209.33	2591.2	2381.9	0.70374	8.0745	7.3708	1.01215	12037
51	0.12970	987.54	0.08703	213.51	2593.0	2379.5	0.71666	8.0573	7.3406	1.01262	11490
52	0.13623	987.08	0.09114	217.69	2594.7	2377.0	0.72954	8.0401	7.3106	1.01309	10972
53	0.14303	986.61	0.09541	221.87	2596.5	2374.6	0.74238	8.0232	7.2808	1.01357	10481
54	0.15012	986.13	0.09985	226.06	2598.3	2372.2	0.75518	8.0063	7.2511	1.01406	10015

TABLE C.1 *(continued)*

t(°C)	P bar	ρ₁ kg/m³	ρg kg/m³	h₁ kJ/kg	hg kJ/kg	Δh₁g kJ/kg	s₁ kJ/kg-K	sg kJ/kg-K	Δs₁g kJ/kg-K	v₁ (m³/kg ×10³)	vg (m³/kg ×10³)
55	0.15752	985.65	0.10446	230.24	2600.0	2369.8	0.76795	7.9896	7.2216	1.01455	9573.
56	0.16522	985.17	0.10925	234.42	2601.8	2367.4	0.78067	7.9730	7.1923	1.01505	9153.
57	0.17324	984.68	0.11423	238.60	2603.5	2364.9	0.79336	7.9566	7.1632	1.01556	8754.
58	0.18159	984.18	0.11939	242.79	2605.3	2362.5	0.80600	7.9402	7.1342	1.01608	8376.
59	0.19028	983.67	0.12475	246.97	2607.0	2360.1	0.81862	7.9240	7.1054	1.01660	8016.
60	0.19932	983.16	0.13030	251.15	2608.8	2357.6	0.83119	7.9080	7.0768	1.01712	7674.
61	0.20873	982.65	0.13607	255.34	2610.5	2355.2	0.84373	7.8920	7.0483	1.01766	7349.
62	0.21851	982.13	0.14204	259.52	2612.3	2352.8	0.85622	7.8762	7.0200	1.01820	7040.
63	0.22868	981.60	0.14824	263.71	2614.0	2350.3	0.86869	7.8605	6.9918	1.01875	6746.
64	0.23925	981.07	0.15465	267.89	2615.8	2347.9	0.88112	7.8450	6.9638	1.01930	6466.
65	0.25022	980.53	0.16130	272.08	2617.5	2345.4	0.89351	7.8295	6.9360	1.01986	6200.
66	0.26163	979.98	0.16819	276.26	2619.2	2343.0	0.90586	7.8142	6.9083	1.02043	5946.
67	0.27347	979.43	0.17532	280.45	2620.9	2340.5	0.91819	7.7989	6.8808	1.02100	5704.
68	0.28576	978.88	0.18269	284.63	2622.7	2338.0	0.93047	7.7838	6.8534	1.02158	5474.
69	0.29852	978.32	0.19033	288.82	2624.4	2335.6	0.94272	7.7689	6.8261	1.02216	5254.
70	0.31176	977.75	0.19823	293.01	2626.1	2333.1	0.95494	7.7540	6.7990	1.02276	5044.6
71	0.32549	977.18	0.20640	297.20	2627.8	2330.6	0.96713	7.7392	6.7721	1.02336	4844.9
72	0.33972	976.60	0.21485	301.39	2629.5	2328.1	0.97928	7.7246	6.7453	1.02396	4654.4
73	0.35448	976.02	0.22358	305.58	2631.2	2325.7	0.99139	7.7100	6.7186	1.02457	4472.6
74	0.36978	975.43	0.23261	309.77	2632.9	2323.2	1.00348	7.6956	6.6921	1.02519	4299.0
75	0.38563	974.84	0.24194	313.96	2634.6	2320.7	1.01553	7.6813	6.6657	1.02581	4133.3
76	0.40205	974.24	0.25158	318.15	2636.3	2318.2	1.02754	7.6670	6.6395	1.02644	3975.0
77	0.41905	973.64	0.26153	322.34	2638.0	2315.7	1.03953	7.6529	6.6134	1.02708	3823.7
78	0.43665	973.03	0.27180	326.54	2639.7	2313.2	1.05149	7.6389	6.5874	1.02772	3679.1
79	0.45487	972.41	0.28241	330.73	2641.4	2310.7	1.06341	7.6250	6.5616	1.02837	3541.0
80	0.47373	971.79	0.29336	334.93	2643.1	2308.1	1.07530	7.6112	6.5359	1.02902	3408.8
81	0.49324	971.17	0.30465	339.12	2644.7	2305.6	1.08716	7.5975	6.5103	1.02969	3282.4
82	0.51342	970.54	0.31631	343.32	2646.4	2303.1	1.09899	7.5838	6.4849	1.03035	3161.5
83	0.53428	969.91	0.32832	347.52	2648.1	2300.6	1.11079	7.5703	6.4595	1.03103	3045.8
84	0.55585	969.27	0.34072	351.72	2649.7	2298.0	1.12255	7.5569	6.4344	1.03171	2935.0
85	0.57815	968.62	0.35349	355.92	2651.4	2295.5	1.13429	7.5436	6.4093	1.03239	2828.9
86	0.60119	967.98	0.36666	360.12	2653.1	2292.9	1.14600	7.5304	6.3844	1.03308	2727.3
87	0.62499	967.32	0.38023	364.32	2654.7	2290.4	1.15768	7.5172	6.3595	1.03378	2630.0
88	0.64958	966.66	0.39420	368.52	2656.4	2287.8	1.16932	7.5042	6.3349	1.03449	2536.8
89	0.67496	966.00	0.40860	372.73	2658.0	2285.3	1.18094	7.4912	6.3103	1.03520	2447.4
90	0.70117	965.33	0.42343	376.93	2659.6	2282.7	1.19253	7.4784	6.2858	1.03591	2361.7
91	0.72823	964.66	0.43870	381.14	2661.3	2280.1	1.20409	7.4656	6.2615	1.03664	2279.5
92	0.75614	963.98	0.45441	385.35	2662.9	2277.5	1.21563	7.4529	6.2373	1.03736	2200.7
93	0.78495	963.30	0.47058	389.56	2664.5	2275.0	1.22713	7.4403	6.2132	1.03810	2125.0
94	0.81465	962.61	0.48723	393.77	2666.1	2272.4	1.23861	7.4278	6.1892	1.03884	2052.4
95	0.84529	961.92	0.5043	397.98	2667.7	2269.8	1.25006	7.4154	6.1653	1.03959	1982.8
96	0.87688	961.22	0.5220	402.20	2669.4	2267.2	1.26148	7.4030	6.1416	1.04034	1915.9
97	0.90945	960.52	0.5401	406.41	2671.0	2264.5	1.27287	7.3908	6.1179	1.04110	1851.6
98	0.94301	959.82	0.5587	410.63	2672.5	2261.9	1.28424	7.3786	6.0944	1.04186	1789.9
99	0.97759	959.11	0.5778	414.84	2674.1	2259.3	1.29557	7.3665	6.0709	1.04264	1730.6
100	1.0132	958.39	0.5975	419.06	2675.7	2256.7	1.30689	7.3545	6.0476	1.04341	1673.6
101	1.0499	957.67	0.6177	423.28	2677.3	2254.0	1.31817	7.3426	6.0244	1.04420	1618.9
102	1.0877	956.95	0.6385	427.51	2678.9	2251.4	1.32943	7.3307	6.0013	1.04499	1566.2
103	1.1266	956.22	0.6598	431.73	2680.5	2248.7	1.34066	7.3189	5.9783	1.04578	1515.5
104	1.1667	955.49	0.6817	435.95	2682.0	2246.1	1.35187	7.3072	5.9553	1.04659	1466.8
105	1.2079	954.75	0.7042	440.18	2683.6	2243.4	1.36305	7.2956	5.9325	1.04739	1420.0
106	1.2503	954.01	0.7273	444.41	2685.1	2240.7	1.37420	7.2840	5.9098	1.04821	1374.9
107	1.2939	953.26	0.7511	448.64	2686.7	2238.0	1.38533	7.2726	5.8872	1.04903	1331.4
108	1.3388	952.51	0.7754	452.87	2688.2	2235.3	1.39644	7.2612	5.8647	1.04986	1289.6
109	1.3850	951.75	0.8004	457.10	2689.7	2232.6	1.40751	7.2498	5.8423	1.05069	1249.4

TABLE C.1 *(continued)*

$t(°C)$	P bar	ρ_l kg/m³	ρ_g kg/m³	h_l kJ/kg	h_g kJ/kg	Δh_{lg} kJ/kg	s_l kJ/kg-K	s_g kJ/kg-K	ΔS_{lg} kJ/kg-K	v_l (m³/kg ×10³)	v_g (m³/kg ×10³)
110	1.4324	951.00	0.8260	461.34	2691.3	2229.9	1.41857	7.2386	5.8200	1.05153	1210.6
111	1.4812	950.23	0.8523	465.57	2692.8	2227.2	1.42960	7.2274	5.7978	1.05238	1173.3
112	1.5313	949.46	0.8793	469.81	2694.3	2224.5	1.44060	7.2163	5.7757	1.05323	1137.3
113	1.5829	948.69	0.9069	474.05	2695.8	2221.8	1.45158	7.2052	5.7536	1.05409	1102.6
114	1.6358	947.91	0.9353	478.29	2697.3	2219.0	1.46253	7.1942	5.7317	1.05495	1069.2
115	1.6902	947.13	0.9643	482.54	2698.8	2216.3	1.47347	7.1833	5.7099	1.05582	1037.0
116	1.7461	946.34	0.9941	486.78	2700.3	2213.5	1.48437	7.1725	5.6881	1.05670	1005.9
117	1.8034	945.55	1.0247	491.03	2701.8	2210.8	1.49526	7.1617	5.6664	1.05758	975.9
118	1.8623	944.76	1.0559	495.28	2703.3	2208.0	1.50612	7.1510	5.6449	1.05847	947.0
119	1.9228	943.96	1.0880	499.53	2704.7	2205.2	1.51695	7.1403	5.6234	1.05937	919.1
120	1.9848	943.16	1.1208	503.78	2706.2	2202.4	1.52776	7.1297	5.6020	1.06027	892.2
121	2.0485	942.35	1.1545	508.03	2707.6	2199.6	1.53855	7.1192	5.5807	1.06118	866.2
122	2.1139	941.54	1.1889	512.29	2709.1	2196.8	1.54932	7.1087	5.5594	1.06210	841.1
123	2.1809	940.72	1.2242	516.55	2710.5	2194.0	1.56006	7.0983	5.5383	1.06302	816.9
124	2.2496	939.90	1.2603	520.81	2712.0	2191.2	1.57078	7.0880	5.5172	1.06395	793.5
125	2.3201	939.07	1.2972	525.07	2713.4	2188.3	1.58148	7.0777	5.4962	1.06488	770.9
126	2.3924	938.24	1.3351	529.33	2714.8	2185.5	1.59216	7.0675	5.4753	1.06582	749.0
127	2.4666	937.41	1.3738	533.60	2716.2	2182.6	1.60281	7.0573	5.4545	1.06677	727.9
128	2.5425	936.57	1.4134	537.86	2717.6	2179.8	1.61344	7.0472	5.4338	1.06772	707.5
129	2.6204	935.73	1.4539	542.13	2719.0	2176.9	1.62405	7.0372	5.4131	1.06869	687.8
130	2.7002	934.88	1.4954	546.41	2720.4	2174.0	1.63464	7.0272	5.3925	1.06965	668.7
131	2.7820	934.03	1.5378	550.68	2721.8	2171.1	1.64521	7.0172	5.3720	1.07063	650.3
132	2.8657	933.18	1.5811	554.96	2723.2	2168.2	1.65575	7.0074	5.3516	1.07161	632.5
133	2.9515	932.32	1.6255	559.23	2724.5	2165.3	1.66628	6.9975	5.3313	1.07260	615.2
134	3.0393	931.45	1.6708	563.52	2725.9	2162.4	1.67678	6.9878	5.3110	1.07359	598.5
135	3.1293	930.59	1.7172	567.80	2727.2	2159.4	1.68726	6.9780	5.2908	1.07459	582.4
136	3.2214	929.71	1.7646	572.08	2728.6	2156.5	1.69772	6.9684	5.2706	1.07560	566.7
137	3.3157	928.84	1.8130	576.37	2729.9	2153.5	1.70816	6.9587	5.2506	1.07661	551.6
138	3.4122	927.96	1.8625	580.66	2731.2	2150.6	1.71858	6.9492	5.2306	1.07764	536.9
139	3.5109	927.07	1.9130	584.95	2732.5	2147.6	1.72898	6.9397	5.2107	1.07866	522.7
140	3.6119	926.18	1.9647	589.24	2733.8	2144.6	1.73936	6.9302	5.1908	1.07970	508.99
141	3.7153	925.29	2.0174	593.54	2735.1	2141.6	1.74972	6.9208	5.1711	1.08074	495.68
142	3.8211	924.39	2.0713	597.84	2736.4	2138.6	1.76006	6.9114	5.1513	1.08179	482.78
143	3.9292	923.49	2.1264	602.14	2737.7	2135.6	1.77038	6.9021	5.1317	1.08285	470.28
144	4.0398	922.58	2.1826	606.44	2739.0	2132.5	1.78068	6.8928	5.1121	1.08391	458.17
145	4.1529	921.67	2.2400	610.75	2740.2	2129.5	1.79096	6.8836	5.0926	1.08498	446.43
146	4.2685	920.76	2.2986	615.06	2741.5	2126.4	1.80122	6.8744	5.0732	1.08606	435.05
147	4.3867	919.84	2.3584	619.37	2742.7	2123.3	1.81146	6.8652	5.0538	1.08715	424.01
148	4.5075	918.92	2.4195	623.68	2743.9	2120.3	1.82169	6.8562	5.0345	1.08824	413.31
149	4.6310	917.99	2.4818	628.00	2745.2	2117.2	1.83189	6.8471	5.0152	1.08934	402.93
150	4.7572	917.06	2.5454	632.32	2746.4	2114.1	1.84208	6.8381	4.9960	1.09044	392.86
151	4.8861	916.12	2.6104	636.64	2747.6	2110.9	1.85224	6.8291	4.9769	1.09156	383.09
152	5.0178	915.18	2.6766	640.96	2748.8	2107.8	1.86239	6.8202	4.9578	1.09268	373.61
153	5.1523	914.24	2.7442	645.29	2750.0	2104.7	1.87252	6.8113	4.9388	1.09381	364.41
154	5.2896	913.29	2.8131	649.62	2751.1	2101.5	1.88263	6.8025	4.9198	1.09495	355.48
155	5.4299	912.33	2.8834	653.95	2752.3	2098.3	1.89273	6.7937	4.9010	1.09609	346.81
156	5.5732	911.38	2.9551	658.28	2753.4	2095.2	1.90280	6.7849	4.8821	1.09724	338.40
157	5.7194	910.41	3.0282	662.62	2754.6	2092.0	1.91286	6.7762	4.8633	1.09840	330.23
158	5.8687	909.45	3.1028	666.96	2755.7	2088.8	1.92290	6.7675	4.8446	1.09957	322.29
159	6.0211	908.48	3.1788	671.30	2756.8	2085.5	1.93292	6.7589	4.8260	1.10074	314.58
160	6.1766	907.50	3.2564	675.65	2758.0	2082.3	1.94293	6.7503	4.8073	1.10193	307.09
161	6.3353	906.52	3.3354	680.00	2759.1	2079.1	1.95292	6.7417	4.7888	1.10312	299.82
162	6.4973	905.54	3.4159	684.35	2760.1	2075.8	1.96289	6.7332	4.7703	1.10432	292.75
163	6.6625	904.55	3.4980	688.71	2761.2	2072.5	1.97284	6.7247	4.7518	1.10552	285.87
164	6.8310	903.56	3.5817	693.07	2762.3	2069.2	1.98278	6.7162	4.7334	1.10674	279.19

TABLE C.1 *(continued)*

t(°C)	P bar	ρl kg/m³	ρg kg/m³	hl kJ/kg	hg kJ/kg	Δhlg kJ/kg	sl kJ/kg-K	sg kJ/kg-K	ΔSlg kJ/kg-K	vl (m³/kg ×10³)	vg (m³/kg ×10³)
165	7.0029	902.56	3.6670	697.43	2763.3	2065.9	1.99271	6.7078	4.7151	1.10796	272.70
166	7.1783	901.56	3.7539	701.79	2764.4	2062.6	2.00261	6.6994	4.6968	1.10919	266.39
167	7.3570	900.55	3.8424	706.16	2765.4	2059.3	2.01250	6.6910	4.6785	1.11043	260.25
168	7.5394	899.54	3.9326	710.53	2766.4	2055.9	2.02237	6.6827	4.6603	1.11168	254.28
169	7.7252	898.53	4.0245	714.90	2767.5	2052.5	2.03223	6.6744	4.6422	1.11293	248.48
170	7.9147	897.51	4.1181	719.28	2768.5	2049.2	2.04207	6.6662	4.6241	1.11420	242.83
171	8.1078	896.48	4.2135	723.66	2769.4	2045.8	2.05190	6.6579	4.6060	1.11547	237.33
172	8.3047	895.46	4.3106	728.05	2770.4	2042.4	2.06171	6.6498	4.5880	1.11675	231.99
173	8.5053	894.42	4.4095	732.43	2771.4	2038.9	2.07150	6.6416	4.5701	1.11804	226.78
174	8.7098	893.38	4.5102	736.83	2772.3	2035.5	2.08128	6.6335	4.5522	1.11934	221.72
175	8.9180	892.34	4.6127	741.22	2773.3	2032.0	2.09105	6.6254	4.5343	1.12065	216.79
176	9.1303	891.30	4.7172	745.62	2774.2	2028.6	2.10080	6.6173	4.5165	1.12196	211.99
177	9.3464	890.24	4.8235	750.02	2775.1	2025.1	2.11054	6.6092	4.4987	1.12329	207.32
178	9.5666	889.19	4.9317	754.43	2776.0	2021.6	2.12026	6.6012	4.4810	1.12462	202.77
179	9.7909	888.13	5.0418	758.84	2776.9	2018.1	2.12996	6.5932	4.4633	1.12596	198.34
180	10.019	887.06	5.154	763.25	2777.8	2014.5	2.13966	6.5853	4.4456	1.12732	194.03
181	10.252	885.99	5.268	767.67	2778.6	2011.0	2.14934	6.5774	4.4280	1.12868	189.82
182	10.489	884.92	5.384	772.09	2779.5	2007.4	2.15900	6.5694	4.4104	1.13005	185.73
183	10.730	883.84	5.502	776.51	2780.3	2003.8	2.16865	6.5616	4.3929	1.13143	181.74
184	10.975	882.75	5.623	780.94	2781.2	2000.2	2.17829	6.5537	4.3754	1.13282	177.85
185	11.225	881.67	5.745	785.37	2782.0	1996.6	2.18791	6.5459	4.3580	1.13422	174.06
186	11.479	880.57	5.870	789.81	2782.8	1993.0	2.19752	6.5381	4.3406	1.13563	170.37
187	11.738	879.47	5.996	794.25	2783.6	1989.3	2.20712	6.5303	4.3232	1.13704	166.77
188	12.001	878.37	6.125	798.69	2784.3	1985.6	2.21670	6.5226	4.3059	1.13847	163.26
189	12.269	877.26	6.256	803.14	2785.1	1982.0	2.22628	6.5148	4.2886	1.13991	159.84
190	12.542	876.15	6.390	807.60	2785.8	1978.2	2.23583	6.5071	4.2713	1.14136	156.50
191	12.819	875.03	6.525	812.06	2786.6	1974.5	2.24538	6.4994	4.2541	1.14282	153.25
192	13.101	873.91	6.663	816.52	2787.3	1970.8	2.25491	6.4918	4.2369	1.14429	150.08
193	13.388	872.78	6.804	820.98	2788.0	1967.0	2.26444	6.4841	4.2197	1.14576	146.98
194	13.680	871.65	6.946	825.46	2788.7	1963.2	2.27395	6.4765	4.2026	1.14725	143.96
195	13.976	870.51	7.091	829.93	2789.4	1959.4	2.28344	6.4689	4.1855	1.14875	141.02
196	14.278	869.37	7.239	834.41	2790.0	1955.6	2.29293	6.4613	4.1684	1.15026	138.14
197	14.585	868.22	7.389	838.90	2790.7	1951.8	2.30241	6.4538	4.1514	1.15178	135.34
198	14.897	867.07	7.541	843.39	2791.3	1947.9	2.31187	6.4463	4.1344	1.15332	132.60
199	15.214	865.91	7.697	847.88	2791.9	1944.0	2.32132	6.4387	4.1174	1.15486	129.93
200	15.537	864.74	7.854	852.38	2792.5	1940.1	2.33076	6.4312	4.1005	1.15641	127.32
201	15.864	863.57	8.014	856.89	2793.1	1936.2	2.34019	6.4238	4.0836	1.15798	124.77
202	16.197	862.40	8.177	861.40	2793.7	1932.3	2.34961	6.4163	4.0667	1.15955	122.29
203	16.536	861.22	8.343	865.91	2794.2	1928.3	2.35902	6.4089	4.0498	1.16114	119.86
204	16.880	860.04	8.511	870.43	2794.8	1924.4	2.36842	6.4014	4.0330	1.16274	117.49
205	17.229	858.85	8.682	874.96	2795.3	1920.4	2.37781	6.3940	4.0162	1.16435	115.17
206	17.584	857.65	8.856	879.49	2795.8	1916.3	2.38719	6.3866	3.9994	1.16597	112.91
207	17.945	856.45	9.033	884.02	2796.3	1912.3	2.39656	6.3793	3.9827	1.16761	110.70
208	18.311	855.25	9.213	888.56	2796.8	1908.2	2.40591	6.3719	3.9660	1.16925	108.55
209	18.684	854.03	9.395	893.11	2797.3	1904.1	2.41526	6.3646	3.9493	1.17091	106.44
210	19.062	852.82	9.581	897.66	2797.7	1900.0	2.42460	6.3572	3.9326	1.17258	104.38
211	19.446	851.59	9.769	902.22	2798.1	1895.9	2.43393	6.3499	3.9160	1.17427	102.36
212	19.836	850.37	9.961	906.78	2798.6	1891.8	2.44326	6.3426	3.8993	1.17596	100.40
213	20.232	849.13	10.155	911.35	2798.9	1887.6	2.45257	6.3353	3.8827	1.17767	98.47
214	20.634	847.89	10.353	915.93	2799.3	1883.4	2.46187	6.3280	3.8662	1.17939	96.59
215	21.042	846.65	10.554	920.51	2799.7	1879.2	2.47117	6.3208	3.8496	1.18113	94.75
216	21.457	845.40	10.758	925.10	2800.0	1874.9	2.48046	6.3135	3.8331	1.18288	92.96
217	21.878	844.14	10.965	929.69	2800.4	1870.7	2.48974	6.3063	3.8166	1.18464	91.20
218	22.305	842.88	11.176	934.29	2800.7	1866.4	2.49901	6.2991	3.8001	1.18641	89.48
219	22.738	841.61	11.389	938.90	2801.0	1862.1	2.50827	6.2919	3.7836	1.18820	87.80

TABLE C.1 *(continued)*

t(°C)	P bar	ρ_l kg/m³	ρ_g kg/m³	h_l kJ/kg	h_g kJ/kg	Δh_{lg} kJ/kg	s_l kJ/kg-K	s_g kJ/kg-K	ΔS_{lg} kJ/kg-K	v_l (m³/kg ×10³)	v_g (m³/kg ×10³)
220	23.178	840.34	11.607	943.51	2801.3	1857.8	2.51753	6.2847	3.7671	1.19000	86.16
221	23.625	839.06	11.827	948.13	2801.5	1853.4	2.52678	6.2775	3.7507	1.19182	84.55
222	24.078	837.77	12.052	952.75	2801.8	1849.0	2.53602	6.2703	3.7343	1.19365	82.98
223	24.538	836.48	12.279	957.38	2802.0	1844.6	2.54525	6.2631	3.7179	1.19549	81.44
224	25.005	835.18	12.511	962.02	2802.2	1840.2	2.55448	6.2559	3.7015	1.19735	79.93
225	25.479	833.87	12.745	966.67	2802.4	1835.7	2.56370	6.2488	3.6851	1.19922	78.46
226	25.959	832.56	12.984	971.32	2802.6	1831.2	2.57292	6.2416	3.6687	1.20111	77.02
227	26.446	831.25	13.226	975.98	2802.7	1826.7	2.58212	6.2345	3.6524	1.20301	75.61
228	26.941	829.92	13.472	980.65	2802.9	1822.2	2.59133	6.2274	3.6361	1.20493	74.23
229	27.442	828.59	13.722	985.32	2803.0	1817.7	2.60052	6.2203	3.6197	1.20687	72.88
230	27.951	827.25	13.976	990.00	2803.1	1813.1	2.60971	6.2131	3.6034	1.20882	71.55
231	28.467	825.91	14.233	994.69	2803.1	1808.5	2.61890	6.2060	3.5871	1.21078	70.26
232	28.990	824.56	14.495	999.39	2803.2	1803.8	2.62808	6.1989	3.5709	1.21276	68.99
233	29.521	823.21	14.761	1004.09	2803.2	1799.2	2.63725	6.1918	3.5546	1.21476	67.75
234	30.059	821.84	15.031	1008.80	2803.3	1794.5	2.64642	6.1847	3.5383	1.21678	66.53
235	30.604	820.47	15.304	1013.52	2803.3	1789.7	2.65559	6.1777	3.5221	1.21881	65.34
236	31.157	819.10	15.583	1018.25	2803.2	1785.0	2.66475	6.1706	3.5058	1.22086	64.17
237	31.718	817.71	15.865	1022.98	2803.2	1780.2	2.67390	6.1635	3.4896	1.22292	63.03
238	32.286	816.32	16.152	1027.72	2803.1	1775.4	2.68306	6.1564	3.4734	1.22500	61.91
239	32.863	814.93	16.443	1032.48	2803.1	1770.6	2.69220	6.1494	3.4572	1.22710	60.82
240	33.447	813.52	16.739	1037.24	2803.0	1765.7	2.70135	6.1423	3.4409	1.22922	59.74
241	34.039	812.11	17.039	1042.00	2802.8	1760.8	2.71049	6.1352	3.4247	1.23136	58.69
242	34.639	810.69	17.344	1046.78	2802.7	1755.9	2.71963	6.1282	3.4085	1.23351	57.66
243	35.247	809.27	17.653	1051.57	2802.5	1751.0	2.72876	6.1211	3.3923	1.23569	56.65
244	35.863	807.83	17.967	1056.36	2802.3	1746.0	2.73789	6.1140	3.3761	1.23788	55.66
245	36.488	806.39	18.286	1061.16	2802.1	1741.0	2.74702	6.1070	3.3600	1.24009	54.69
246	37.121	804.94	18.610	1065.98	2801.9	1735.9	2.75615	6.0999	3.3438	1.24232	53.73
247	37.762	803.49	18.939	1070.80	2801.6	1730.8	2.76528	6.0929	3.3276	1.24458	52.80
248	38.412	802.02	19.273	1075.63	2801.4	1725.7	2.77440	6.0858	3.3114	1.24685	51.89
249	39.070	800.55	19.612	1080.47	2801.1	1720.6	2.78352	6.0787	3.2952	1.24914	50.99
250	39.737	799.07	19.956	1085.32	2800.7	1715.4	2.79264	6.0717	3.2790	1.25145	50.111
251	40.412	797.58	20.305	1090.18	2800.4	1710.2	2.80176	6.0646	3.2629	1.25379	49.248
252	41.096	796.09	20.660	1095.05	2800.0	1705.0	2.81088	6.0575	3.2467	1.25614	48.403
253	41.789	794.59	21.020	1099.93	2799.6	1699.7	2.82000	6.0505	3.2305	1.25852	47.573
254	42.491	793.07	21.386	1104.82	2799.2	1694.4	2.82911	6.0434	3.2143	1.26092	46.760
255	43.202	791.55	21.757	1109.72	2798.8	1689.1	2.83823	6.0363	3.1981	1.26334	45.962
256	43.922	790.03	22.134	1114.63	2798.3	1683.7	2.84735	6.0292	3.1819	1.26578	45.180
257	44.651	788.49	22.517	1119.55	2797.8	1678.3	2.85646	6.0222	3.1657	1.26825	44.412
258	45.390	786.94	22.905	1124.48	2797.3	1672.8	2.86558	6.0151	3.1495	1.27074	43.658
259	46.137	785.39	23.300	1129.43	2796.8	1667.4	2.87470	6.0080	3.1333	1.27325	42.919
260	46.895	783.83	23.700	1134.38	2796.2	1661.9	2.88382	6.0009	3.1170	1.27579	42.194
261	47.661	782.25	24.107	1139.34	2795.6	1656.3	2.89294	5.9938	3.1008	1.27836	41.482
262	48.437	780.67	24.520	1144.32	2795.0	1650.7	2.90206	5.9866	3.0846	1.28095	40.783
263	49.223	779.08	24.939	1149.31	2794.4	1645.1	2.91119	5.9795	3.0683	1.28356	40.098
264	50.018	777.48	25.365	1154.31	2793.7	1639.4	2.92031	5.9724	3.0521	1.28620	39.424
265	50.823	775.87	25.797	1159.32	2793.0	1633.7	2.92944	5.9652	3.0358	1.28887	38.764
266	51.638	774.25	26.236	1164.35	2792.3	1628.0	2.93858	5.9581	3.0195	1.29156	38.115
267	52.463	772.63	26.682	1169.38	2791.6	1622.2	2.94771	5.9509	3.0032	1.29429	37.478
268	53.298	770.99	27.135	1174.43	2790.8	1616.3	2.95685	5.9437	2.9869	1.29704	36.853
269	54.143	769.34	27.595	1179.49	2790.0	1610.5	2.96599	5.9365	2.9705	1.29981	36.239
270	54.999	767.68	28.061	1184.57	2789.1	1604.6	2.97514	5.9293	2.9542	1.30262	35.636
271	55.864	766.01	28.536	1189.66	2788.3	1598.6	2.98429	5.9221	2.9378	1.30546	35.044
272	56.740	764.34	29.017	1194.76	2787.4	1592.6	2.99345	5.9149	2.9215	1.30833	34.462
273	57.627	762.65	29.506	1199.87	2786.5	1586.6	3.00261	5.9077	2.9051	1.31122	33.891
274	58.524	760.95	30.003	1205.00	2785.5	1580.5	3.01178	5.9004	2.8886	1.31415	33.330

TABLE C.1 *(continued)*

t(°C)	P bar	ρ_l kg/m³	ρ_g kg/m³	h_l kJ/kg	h_g kJ/kg	Δh_{lg} kJ/kg	s_l kJ/kg-K	s_g kJ/kg-K	ΔS_{lg} kJ/kg-K	v_l (m³/kg ×10³)	v_g (m³/kg ×10³)
275	59.431	759.24	30.507	1210.15	2784.5	1574.4	3.02095	5.8931	2.8722	1.31711	32.779
276	60.350	757.52	31.020	1215.30	2783.5	1568.2	3.03013	5.8859	2.8557	1.32011	32.237
277	61.279	755.78	31.541	1220.47	2782.5	1562.0	3.03931	5.8786	2.8392	1.32313	31.705
278	62.219	754.04	32.069	1225.66	2781.4	1555.8	3.04850	5.8712	2.8227	1.32619	31.182
279	63.170	752.28	32.607	1230.86	2780.3	1549.4	3.05770	5.8639	2.8062	1.32929	30.669
280	64.132	750.52	33.152	1236.08	2779.2	1543.1	3.06691	5.8565	2.7896	1.33242	30.164
281	65.105	748.74	33.707	1241.31	2778.0	1536.7	3.07613	5.8492	2.7730	1.33558	29.668
282	66.089	746.95	34.270	1246.56	2776.8	1530.2	3.08535	5.8418	2.7564	1.33878	29.180
283	67.085	745.14	34.843	1251.82	2775.5	1523.7	3.09458	5.8344	2.7398	1.34202	28.701
284	68.092	743.33	35.424	1257.10	2774.3	1517.2	3.10382	5.8269	2.7231	1.34530	28.229
285	69.111	741.50	36.015	1262.40	2773.0	1510.6	3.11308	5.8195	2.7064	1.34862	27.766
286	70.141	739.66	36.616	1267.71	2771.6	1503.9	3.12234	5.8120	2.6896	1.35197	27.310
287	71.183	737.81	37.226	1273.04	2770.2	1497.2	3.13161	5.8045	2.6729	1.35537	26.863
288	72.237	735.94	37.847	1278.39	2768.8	1490.4	3.14089	5.7969	2.6560	1.35881	26.422
289	73.303	734.06	38.478	1283.75	2767.4	1483.6	3.15019	5.7894	2.6392	1.36229	25.989
290	74.380	732.16	39.119	1289.14	2765.9	1476.7	3.15950	5.7818	2.6223	1.36581	25.563
291	75.470	730.26	39.770	1294.54	2764.3	1469.8	3.16882	5.7742	2.6054	1.36938	25.144
292	76.572	728.33	40.433	1299.96	2762.8	1462.8	3.17815	5.7665	2.5884	1.37300	24.732
293	77.686	726.40	41.106	1305.40	2761.2	1455.8	3.18750	5.7589	2.5714	1.37666	24.327
294	78.813	724.45	41.791	1310.86	2759.5	1448.7	3.19686	5.7511	2.5543	1.38037	23.928
295	79.952	722.48	42.488	1316.34	2757.8	1441.5	3.20623	5.7434	2.5372	1.38412	23.536
296	81.103	720.50	43.196	1321.84	2756.1	1434.3	3.21563	5.7356	2.5200	1.38793	23.150
297	82.268	718.50	43.917	1327.36	2754.3	1427.0	3.22503	5.7278	2.5028	1.39179	22.770
298	83.445	716.49	44.650	1332.90	2752.5	1419.6	3.23446	5.7200	2.4855	1.39570	22.397
299	84.635	714.46	45.395	1338.47	2750.7	1412.2	3.24390	5.7121	2.4682	1.39967	22.029
300	85.838	712.41	46.154	1344.05	2748.7	1404.7	3.25336	5.7042	2.4508	1.40369	21.667
301	87.054	710.35	46.926	1349.66	2746.8	1397.1	3.26284	5.6962	2.4334	1.40777	21.310
302	88.283	708.27	47.711	1355.29	2744.8	1389.5	3.27233	5.6882	2.4159	1.41190	20.960
303	89.526	706.17	48.510	1360.95	2742.8	1381.8	3.28185	5.6802	2.3983	1.41610	20.614
304	90.782	704.05	49.324	1366.63	2740.7	1374.0	3.29139	5.6721	2.3807	1.42035	20.274
305	92.051	701.92	50.15	1372.33	2738.5	1366.2	3.30095	5.6640	2.3630	1.42467	19.940
306	93.334	699.76	51.00	1378.06	2736.3	1358.3	3.31053	5.6558	2.3453	1.42906	19.610
307	94.631	697.59	51.85	1383.81	2734.1	1350.3	3.32014	5.6476	2.3275	1.43351	19.285
308	95.942	695.40	52.73	1389.59	2731.8	1342.2	3.32977	5.6393	2.3096	1.43803	18.966
309	97.267	693.18	53.62	1395.40	2729.4	1334.0	3.33943	5.6310	2.2916	1.44262	18.651
310	98.605	690.95	54.52	1401.23	2727.0	1325.8	3.34911	5.6226	2.2735	1.44728	18.340
311	99.958	688.70	55.45	1407.10	2724.6	1317.5	3.35882	5.6142	2.2554	1.45202	18.035
312	101.326	686.42	56.39	1412.99	2722.1	1309.1	3.36856	5.6057	2.2372	1.45683	17.734
313	102.707	684.12	57.35	1418.91	2719.5	1300.6	3.37832	5.5972	2.2189	1.46173	17.437
314	104.104	681.80	58.33	1424.86	2716.9	1292.0	3.38812	5.5886	2.2005	1.46670	17.145
315	105.51	679.46	59.32	1430.84	2714.2	1283.3	3.39795	5.5799	2.1820	1.47176	16.856
316	106.94	677.09	60.34	1436.86	2711.4	1274.6	3.40781	5.5712	2.1634	1.47691	16.572
317	108.38	674.70	61.38	1442.90	2708.6	1265.7	3.41770	5.5624	2.1447	1.48215	16.293
318	109.84	672.28	62.44	1448.99	2705.7	1256.7	3.42763	5.5535	2.1259	1.48748	16.017
319	111.31	669.83	63.51	1455.10	2702.8	1247.6	3.43760	5.5446	2.1070	1.49291	15.745
320	112.79	667.36	64.62	1461.25	2699.7	1238.5	3.44760	5.5356	2.0880	1.49843	15.476
321	114.29	664.87	65.74	1467.44	2696.6	1229.2	3.45765	5.5265	2.0688	1.50406	15.212
322	115.81	662.34	66.89	1473.67	2693.5	1219.8	3.46773	5.5173	2.0496	1.50980	14.951
323	117.34	659.78	68.06	1479.93	2690.2	1210.3	3.47786	5.5081	2.0302	1.51565	14.693
324	118.89	657.20	69.26	1486.24	2686.9	1200.7	3.48803	5.4987	2.0107	1.52161	14.439
325	120.46	654.58	70.48	1492.58	2683.5	1190.9	3.49825	5.4893	1.9911	1.52769	14.189
326	122.04	651.93	71.73	1498.97	2680.1	1181.1	3.50852	5.4798	1.9713	1.53390	13.942
327	123.64	649.25	73.00	1505.40	2676.5	1171.1	3.51884	5.4702	1.9513	1.54024	13.698
328	125.25	646.53	74.31	1511.88	2672.9	1161.0	3.52921	5.4605	1.9313	1.54671	13.457
329	126.88	643.78	75.65	1518.41	2669.1	1150.7	3.53963	5.4506	1.9110	1.55332	13.219

TABLE C.1 *(continued)*

t(°C)	P bar	ρ$_l$ kg/m³	ρ$_g$ kg/m³	h$_l$ kJ/kg	h$_g$ kJ/kg	Δh$_{lg}$ kJ/kg	s$_l$ kJ/kg-K	s$_g$ kJ/kg-K	ΔS$_{lg}$ kJ/kg-K	v$_l$ (m³/kg ×10³)	v$_g$ (m³/kg ×10³)
330	128.52	641.0	77.01	1525.0	2665.3	1140.3	3.5501	5.4407	1.8906	1.5601	12.985
331	130.19	638.2	78.41	1531.6	2661.4	1129.8	3.5607	5.4307	1.8700	1.5670	12.753
332	131.87	635.3	79.84	1538.3	2657.4	1119.1	3.5713	5.4205	1.8493	1.5740	12.524
333	133.57	632.4	81.31	1545.0	2653.3	1108.3	3.5819	5.4103	1.8283	1.5813	12.298
334	135.28	629.5	82.82	1551.8	2649.0	1097.2	3.5927	5.3999	1.8072	1.5887	12.075
335	137.01	626.5	84.36	1558.6	2644.7	1086.1	3.6035	5.3894	1.7859	1.5963	11.854
336	138.76	623.4	85.94	1565.5	2640.3	1074.7	3.6144	5.3787	1.7643	1.6040	11.636
337	140.53	620.3	87.56	1572.5	2635.7	1063.2	3.6253	5.3679	1.7426	1.6120	11.421
338	142.32	617.2	89.22	1579.5	2631.1	1051.5	3.6364	5.3569	1.7205	1.6202	11.208
339	144.12	614.0	90.93	1586.7	2626.3	1039.6	3.6475	5.3458	1.6983	1.6286	10.997
340	145.94	610.8	92.69	1593.8	2621.3	1027.5	3.6587	5.3345	1.6758	1.6373	10.788
341	147.78	607.5	94.50	1601.1	2616.3	1015.2	3.6701	5.3231	1.6530	1.6462	10.582
342	149.64	604.1	96.36	1608.4	2611.1	1002.7	3.6815	5.3114	1.6299	1.6553	10.378
343	151.52	600.7	98.27	1615.8	2605.7	989.9	3.6930	5.2996	1.6066	1.6647	10.176
344	153.42	597.2	100.24	1623.3	2600.2	976.9	3.7047	5.2876	1.5829	1.6745	9.976
345	155.33	593.7	102.27	1630.9	2594.5	963.6	3.7164	5.2753	1.5589	1.6845	9.778
346	157.27	590.0	104.37	1638.6	2588.7	950.1	3.7283	5.2629	1.5345	1.6948	9.581
347	159.22	586.3	106.53	1646.4	2582.7	936.3	3.7404	5.2502	1.5098	1.7056	9.387
348	161.20	582.5	108.77	1654.3	2576.5	922.2	3.7526	5.2372	1.4847	1.7166	9.194
349	163.20	578.7	111.08	1662.3	2570.1	907.8	3.7649	5.2240	1.4591	1.7281	9.002
350	165.21	574.7	113.48	1670.4	2563.5	893.0	3.7774	5.2105	1.4331	1.7401	8.812
351	167.25	570.6	115.96	1678.7	2556.6	877.9	3.7901	5.1967	1.4066	1.7525	8.623
352	169.31	566.4	118.54	1687.1	2549.6	862.4	3.8030	5.1825	1.3796	1.7654	8.436
353	171.38	562.2	121.22	1695.7	2542.2	846.6	3.8161	5.1681	1.3520	1.7788	8.249
354	173.48	557.8	124.01	1704.4	2534.6	830.2	3.8294	5.1532	1.3238	1.7929	8.064
355	175.61	553.2	126.92	1713.3	2526.7	813.5	3.8429	5.1379	1.2950	1.8076	7.879
356	177.75	548.5	129.95	1722.4	2518.5	796.2	3.8568	5.1222	1.2655	1.8230	7.695
357	179.92	543.7	133.13	1731.7	2510.0	778.3	3.8709	5.1060	1.2352	1.8392	7.512
358	182.11	538.7	136.46	1741.2	2501.1	759.9	3.8853	5.0893	1.2040	1.8563	7.328
359	184.32	533.5	139.96	1750.9	2491.8	740.8	3.9001	5.0721	1.1719	1.8744	7.145
360	186.55	528.1	143.65	1761.0	2482.0	721.1	3.9153	5.0542	1.1388	1.8936	6.962
361	188.81	522.5	147.54	1771.3	2471.8	700.5	3.9310	5.0355	1.1046	1.9140	6.778
362	191.10	516.6	151.68	1782.0	2461.0	679.0	3.9471	5.0161	1.0690	1.9358	6.593
363	193.40	510.4	156.08	1793.1	2449.6	656.5	3.9638	4.9958	1.0320	1.9592	6.407
364	195.74	503.9	160.80	1804.6	2437.5	632.9	3.9812	4.9745	0.9933	1.9845	6.219
365.0	198.09	497.0	165.88	1816.7	2424.6	607.9	3.9994	4.9520	0.9526	2.0120	6.028
365.5	199.28	493.4	168.58	1822.9	2417.8	594.8	4.0088	4.9402	0.9314	2.0268	5.932
366.0	200.48	489.7	171.39	1829.3	2410.7	581.3	4.0185	4.9280	0.9096	2.0422	5.835
366.5	201.68	485.8	174.33	1835.9	2403.3	567.4	4.0284	4.9155	0.8870	2.0585	5.736
367.0	202.89	481.8	177.42	1842.7	2395.6	552.9	4.0387	4.9024	0.8637	2.0757	5.636
367.5	204.11	477.6	180.67	1849.8	2387.6	537.8	4.0493	4.8888	0.8395	2.0939	5.535
368.0	205.33	473.2	184.11	1857.1	2379.2	522.1	4.0602	4.8746	0.8143	2.1133	5.432
368.5	206.56	468.6	187.75	1864.7	2370.3	505.6	4.0717	4.8597	0.7880	2.1340	5.326
369.0	207.80	463.8	191.63	1872.6	2360.9	488.3	4.0836	4.8440	0.7604	2.1563	5.218
369.5	209.05	458.6	195.79	1880.9	2350.9	470.0	4.0962	4.8274	0.7313	2.1804	5.107
370.0	210.30	453.1	200.29	1889.7	2340.2	450.4	4.1094	4.8098	0.7003	2.2068	4.993
370.5	211.56	447.2	205.21	1899.1	2328.5	429.4	4.1236	4.7907	0.6671	2.2361	4.873
371.0	212.83	440.7	210.64	1909.3	2315.8	406.5	4.1389	4.7700	0.6311	2.2689	4.747
371.5	214.11	433.5	216.74	1920.5	2301.6	381.2	4.1558	4.7471	0.5913	2.3067	4.614
372.0	215.39	425.3	223.74	1933.0	2285.5	352.5	4.1748	4.7212	0.5464	2.3515	4.469
372.5	216.69	415.4	232.1	1947.7	2266.6	318.9	4.1971	4.6910	0.4939	2.4074	4.309
373.0	217.99	402.4	242.7	1966.6	2243.0	276.4	4.2258	4.6536	0.4277	2.4850	4.121
373.5	219.30	385.0	259.0	1991.6	2207.3	215.7	4.2640	4.5977	0.3337	2.5974	3.861
373.976	220.55	322		2086		0	4.409		0	3.106	