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The Calculated Continuous Emission of a LTE Hydrogen Plasma

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The total continuous emission coefficient for a LTE hydrogen plasma at one atmosphere is calculated for a temperature range from 8000 to 16000 K and a wavelength range from 400 to 15000 Å. Contributions involving the species H, H_2^+, H^-, and H_2, as well as the wings of Stark-broadened hydrogen lines are included. This calculation will permit the radiation emitted from a laboratory hydrogen plasma to be used as a high intensity spectral radiance calibration standard.

Key words: Emission coefficient; hydrogen; hydrogen continuum; LTE; spectral radiance standard; Stark-broadening.

1. Introduction

The continuous emission of hydrogen has long been of importance in astrophysics and laboratory plasma physics. Despite this, an accurate calculation of the total emission coefficient has not been accomplished, since recent calculations [1, 2][1] show discrepancies of as much as 20 percent. This could be due to contributions from the continuous emission of H^-, H_2^+, and H_2 not being taken into account at all, or their emission coefficients not being accurately calculated. Newly available absorption coefficients for H^-, H_2^+, and H_2 [3, 4, 5, 6, 7] now permit determination of the total continuous hydrogen emission coefficient with an uncertainty estimated not to exceed 2 percent throughout the visible and near-ultraviolet spectral regions.

The prime purpose of the calculation is to accurately describe the spectrum (both continuous and line wing radiation) of a hydrogen plasma. This is done for a temperature range from 8000 to 16000 K and for the wavelength interval from 400 to 15000 Å.

An accurate calculation of the total continuous emission coefficient will allow the continuous emission spectrum of hydrogen to be used as a spectral radiance calibration standard. With the exception of some fairly narrow spectral regions (around hydrogen line central wavelengths) this continuum will be usable in the near ultraviolet down to 1700 Å (see section 3f), the visible, and the near infrared portions of the spectrum.

2. Calculation of Particle Densities

The following species were considered: H^+, e^-, and H. The particle densities are calculated for a LTE[2] hydrogen plasma at 1 atm. The usual assumption of charge conservation was made, and the plasma was treated as an ideal gas except for Coulomb interactions between the particles which were treated by the Debye-Hückel [9] approximation. High density corrections [10] were taken into account to obtain partition function cutoffs and modifications to the plasma pressure and Saha-equation. The particle densities obtained agree within 0.1 percent with those calculated by Patch [11].

3. Calculation of Emission Coefficients

Four major contributions were included in the calculation of the total continuous emission coefficient. They were: free-free and free-bound transitions of electrons in (a) the field of protons (H continuum), as well as (b) hydrogen atoms (H^- continuum), (c) free-free and free-bound transitions of protons in the field of hydrogen atoms (H_2^+ continuum), and (d) the continuous emission coefficient of quasi-molecular hydrogen. For an optically thin homogeneous emitting layer the emission coefficient in watts $cm^{-3}sr^{-1}cm^{-1}$ is given by [12]:

$$\epsilon_\lambda = \left\{ \frac{32\pi^2}{3\sqrt{3}} \frac{e^6}{c^2(2\pi m)^{3/2}} \frac{N_e^2}{(kT)^{1/2}} \exp\left(-c_2/\lambda T\right) \frac{1}{\lambda^2} x \right.$$

$$\left[\frac{2E_i}{kT} \exp\left(-\Delta E_i/kT\right) \sum_{n_{\min}}^{15} \frac{\gamma_{fb}}{n^3} x \exp\left(E_i/n^2kT\right) + \bar{\gamma}_{fb} \right.$$

$$\left. \left(\exp(E_i/16^2kT) - \exp\left(\Delta E_i/kT\right)\right) x \exp\left(-\Delta E_i/kT\right) + \gamma_{ff} \right]$$

$$\left. + G(\lambda, T) N_e N_H + F(\lambda, T) N_P N_H + Q(\lambda, T) N_H^2 \right\} x\, 10^7. \tag{1}$$

[1] Figures in brackets indicate the literature references at the end of this paper.

[2] LTE is the abbreviation for local thermodynamic equilibrium which is a condition that the particles of the system obey a Maxwellian velocity distribution and the atomic levels are populated according to Maxwell-Boltzmann statistics. For a more complete description of LTE see ref. [8].

(a) H continuum: The first term in the square brackets represents the contribution from the H continuum [13] with high density corrections according to reference [10]. N_e is the electron density (cm^{-3}), T is the temperature (K), λ is the wavelength (cm), c_2 is the second radiation constant (=1.43879 cm K), E_i is the ionization potential of hydrogen, ΔE_i is the lowering of the ionization potential given by $\Delta E_i = e^2/\rho_D$ [10], where $\rho_D = [kT/8\pi e^2 N_e]^{1/2}$, γ_{ff} and γ_{fb} are the free-free and free-bound Gaunt factors respectively [14] averaged over a Maxwellian velocity distribution, and n is the upper state principal quantum number. The summation is taken from a value of n defined by

$$n_{\min} \geqslant [E_i/(hc/\lambda + \Delta E_i)]^{1/2}$$

to $n=15$ unless high density corrections require a lower cutoff. When the high density correction allows $n \geqslant 16$ all free-bound transitions are approximately taken into account by integrating $1/n^3 \exp(E_i/n^2kT)$ from $n=16$ to $n=n_{\max}$, where $n_{\max}$ is the quantum number of the last energy level below $E_i - \Delta E_i$, i.e., $n_{\max} \leqslant (E_i/\Delta E_i)^{1/2}$ and replacing $\bar{\gamma}_{fb} = \gamma_{fb}$ ($n=15$). If high density corrections require $n_{\max} < 15$ then the term multiplied by $\bar{\gamma}_{fb}$ is omitted.

The averaged free-free and free-bound Gaunt factors obtained from reference [14] are tabulated in tables 1 and 2 respectively. This tabulation is done so the Gaunt factors can be easily obtained for a given wavelength and temperature.

(b) H^- continuum: The term containing $G(\lambda, T)$ represents the contribution from the H^- continuum, where N_H is the density of neutral hydrogen. $G(\lambda, T)$ is given in terms of the free-bound and free-free H^- absorption coefficients [3, 4, 5] as

$$G(\lambda, T) = (\alpha(H^-)_{fb} + \alpha(H^-)_{ff})[1 - \exp(-c_2/\lambda T)]B(\lambda, T)kT \qquad (2)$$

where $B(\lambda, T)$ is the Planck function and $1 - \exp(-c_2/\lambda T)$ corrects for induced emission. The absorption coefficient for free-free H^- was interpolated for wavelengths below 3038 Å and extrapolated for temperatures above 10080 K. The parametric function used for the extension was found to fit the original data [4] over all wavelengths and temperatures to within 0.1 percent in the standard deviation. Although the interpolation below 3038 Å may be questionable around 1130 Å [15] for the conditions considered here, the H^- free-free contribution to the total emission continuum is 20 percent or less below 3038 Å and above 10080 K. Therefore, a possible 5 percent error in this contribution would reflect an uncertainty of 1 percent or less in the total.

(c) H_2^+ continuum: The term containing $F(\lambda, T)$ represents the contribution from the H_2^+ continuum where N_P is the proton density ($N_P \approx N_e$). $F(\lambda, T)$ is represented in terms of the free-bound and free-free H_2^+ absorption coefficient [6] as [3]

$$F(\lambda, T) = (\alpha(H_2^+)_{fb} + \alpha(H_2^+)_{ff})[1 - \exp(-c_2/\lambda T)]B(\lambda, T). \qquad (3)$$

(d) Quasi-molecular hydrogen continuum: The term containing $Q(\lambda, T)$ represents the contribution from quasi-molecular hydrogen. In terms of absorption this continuum is a result of the transition from the repulsive $1s\sigma 2p\sigma\, {}^3\Sigma_u^+$ state to the excited stable $1s\sigma 2s\sigma\, {}^3\Sigma_g^+$ state of the hydrogen molecule. The repulsive state is formed as a result of the collision of hydrogen ground state atoms with parallel spins, i.e.,

$$H(1s^2S) + H(1s^2S) \rightarrow H_2(1s\sigma 2p\sigma\, {}^3\Sigma_u^+)$$

$$H_2(1s\sigma 2p\sigma\, {}^3\Sigma_u^+) + h\nu \rightarrow H_2^*(1s\sigma 2s\sigma\, {}^3\Sigma_g^+). \qquad (4)$$

$Q(\lambda, T)$ is given in terms of the absorption coefficient [7] of this process as

$$Q(\lambda, T) = \alpha(H_2^{\text{quasi}})[1 - \exp(-c_2/\lambda T)]B(\lambda, T). \qquad (5)$$

This transition is the only important contribution to the quasi-molecular hydrogen continuum for wavelengths larger than 1700 Å. Below this wavelength, quasi-molecular continuum contributions arise from other molecular states [16]. These are not considered here since the available data are incomplete and of uncertain reliability.

(e) Other possible continuum contributions: Contributions from other species are estimated to be insignificant for the stated conditions, e.g., H_3^+ [11]. A forbidden continuum resulting from H^- has also been hypothesized [17], and should occur principally in the near-infrared. A more recent paper [18] states that this continuum is significant only for electron densities of roughly $10^{20} cm^{-3}$ which is three orders of magnitude above the highest density considered in this calculation.

(f) Contributions from lines superimposed on the continuum: The intensity from the wings of Stark-broadened hydrogen lines makes a non-negligible contribution at higher densities in certain spectral regions [19]. This contribution must be included as part of the continuous emission from hydrogen in these spectral regions. Extensive calculations of complete hydrogen line profiles including the wings for the first four lines of the Lyman and Balmer spectral series have been carried out [20, 21]. The far wings of other hydrogen lines can also be estimated [22] to within 10 percent. In the vacuum ultraviolet, molecular line emission from the strong Lyman and Werner bands of H_2 is superimposed on the continuum and should be significant up to the highest temperature considered here. Because of the very complicated spectrum of H_2 and the incompleteness of the available f-value data, the H_2 molecular line emission could not be included in these calculations.

[3] The absorption coefficients as stated in eq (3) are those of ref. [6] divided by 4π, i.e., per steradian.

TABLE 1. *Free-free Gaunt factors*

λ in Ang-stroms	Temperature in K																
	8000	8500	9000	9500	10000	10500	11000	11500	12000	12500	13000	13500	14000	14500	15000	15500	16000
500	1.1515	1.1550	1.1584	1.1616	1.1647	1.1677	1.1706	1.1733	1.1759	1.1783	1.1807	1.1829	1.1849	1.1869	1.1887	1.1904	1.1919
1000	1.1115	1.1128	1.1140	1.1152	1.1165	1.1177	1.1189	1.1200	1.1212	1.1224	1.1235	1.1247	1.1258	1.1269	1.1281	1.1292	1.1303
1500	1.1149	1.1164	1.1179	1.1194	1.1209	1.1223	1.1238	1.1252	1.1267	1.1281	1.1295	1.1309	1.1323	1.1337	1.1351	1.1365	1.1379
2000	1.1171	1.1188	1.1205	1.1222	1.1238	1.1255	1.1271	1.1288	1.1304	1.1320	1.1336	1.1352	1.1368	1.1384	1.1400	1.1415	1.1431
2500	1.1190	1.1208	1.1226	1.1245	1.1263	1.1281	1.1299	1.1317	1.1335	1.1353	1.1371	1.1388	1.1406	1.1424	1.1441	1.1458	1.1476
3000	1.1208	1.1228	1.1247	1.1267	1.1287	1.1306	1.1326	1.1345	1.1364	1.1383	1.1402	1.1421	1.1440	1.1459	1.1478	1.1497	1.1515
3500	1.1204	1.1226	1.1248	1.1270	1.1292	1.1314	1.1336	1.1358	1.1380	1.1402	1.1424	1.1446	1.1468	1.1491	1.1513	1.1535	1.1558
4000	1.1223	1.1247	1.1272	1.1296	1.1320	1.1344	1.1368	1.1392	1.1417	1.1441	1.1465	1.1489	1.1513	1.1537	1.1561	1.1585	1.1609
4500	1.1238	1.1264	1.1290	1.1316	1.1342	1.1368	1.1394	1.1419	1.1445	1.1471	1.1496	1.1522	1.1547	1.1573	1.1598	1.1623	1.1649
5000	1.1253	1.1281	1.1309	1.1337	1.1365	1.1392	1.1420	1.1447	1.1475	1.1502	1.1529	1.1556	1.1583	1.1610	1.1637	1.1663	1.1690
5500	1.1273	1.1303	1.1333	1.1363	1.1393	1.1423	1.1453	1.1482	1.1512	1.1541	1.1570	1.1599	1.1628	1.1657	1.1686	1.1714	1.1742
6000	1.1268	1.1300	1.1332	1.1364	1.1395	1.1427	1.1459	1.1491	1.1523	1.1554	1.1586	1.1618	1.1650	1.1682	1.1713	1.1745	1.1777
6500	1.1275	1.1309	1.1342	1.1375	1.1408	1.1442	1.1475	1.1509	1.1542	1.1576	1.1609	1.1643	1.1676	1.1710	1.1744	1.1777	1.1811
7000	1.1289	1.1324	1.1359	1.1393	1.1428	1.1463	1.1498	1.1533	1.1567	1.1602	1.1637	1.1672	1.1707	1.1742	1.1777	1.1811	1.1846
7500	1.1307	1.1343	1.1379	1.1416	1.1452	1.1488	1.1524	1.1560	1.1596	1.1632	1.1668	1.1704	1.1740	1.1776	1.1812	1.1848	1.1883
8000	1.1351	1.1391	1.1430	1.1468	1.1507	1.1546	1.1584	1.1623	1.1661	1.1699	1.1737	1.1775	1.1812	1.1850	1.1887	1.1925	1.1962
8500	1.1361	1.1402	1.1442	1.1481	1.1521	1.1560	1.1600	1.1639	1.1678	1.1717	1.1755	1.1794	1.1832	1.1870	1.1908	1.1946	1.1983
9000	1.1371	1.1413	1.1454	1.1494	1.1535	1.1575	1.1616	1.1655	1.1695	1.1735	1.1774	1.1813	1.1852	1.1890	1.1929	1.1967	1.2005
9500	1.1382	1.1425	1.1467	1.1509	1.1550	1.1591	1.1632	1.1673	1.1714	1.1754	1.1794	1.1833	1.1873	1.1912	1.1951	1.1990	1.2028
10000	1.1395	1.1438	1.1481	1.1524	1.1566	1.1609	1.1650	1.1692	1.1733	1.1774	1.1815	1.1856	1.1896	1.1936	1.1975	1.2015	1.2053
10500	1.1404	1.1449	1.1494	1.1538	1.1582	1.1625	1.1668	1.1711	1.1753	1.1795	1.1837	1.1879	1.1920	1.1961	1.2001	1.2041	1.2081
11000	1.1418	1.1464	1.1510	1.1555	1.1600	1.1645	1.1689	1.1733	1.1776	1.1819	1.1862	1.1904	1.1946	1.1988	1.2029	1.2070	1.2111
11500	1.1659	1.1721	1.1783	1.1843	1.1903	1.1962	1.2020	1.2077	1.2134	1.2190	1.2245	1.2299	1.2352	1.2405	1.2457	1.2508	1.2558
12000	1.1666	1.1728	1.1790	1.1851	1.1912	1.1971	1.2030	1.2088	1.2145	1.2202	1.2257	1.2312	1.2366	1.2419	1.2472	1.2523	1.2574
12500	1.1666	1.1729	1.1791	1.1853	1.1913	1.1973	1.2032	1.2090	1.2148	1.2204	1.2260	1.2315	1.2370	1.2423	1.2476	1.2528	1.2579
13000	1.1664	1.1727	1.1789	1.1850	1.1911	1.1971	1.2030	1.2088	1.2146	1.2202	1.2258	1.2314	1.2368	1.2422	1.2475	1.2527	1.2578
13500	1.1660	1.1723	1.1785	1.1846	1.1907	1.1966	1.2025	1.2084	1.2141	1.2198	1.2254	1.2309	1.2364	1.2417	1.2470	1.2523	1.2574
14000	1.1655	1.1718	1.1780	1.1841	1.1901	1.1961	1.2020	1.2078	1.2136	1.2193	1.2249	1.2304	1.2359	1.2412	1.2465	1.2518	1.2570
14500	1.1651	1.1714	1.1775	1.1836	1.1897	1.1956	1.2015	1.2074	1.2131	1.2188	1.2244	1.2299	1.2354	1.2408	1.2461	1.2514	1.2565
15000	1.1648	1.1710	1.1772	1.1833	1.1893	1.1953	1.2012	1.2070	1.2127	1.2184	1.2240	1.2296	1.2351	1.2405	1.2458	1.2511	1.2563

TABLE 2. *Free-bound Gaunt factors*

λ in Angstroms	Quantum number of lower bound state														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
500	.8915	1.0471	1.0685	1.0757	1.0791	1.0811	1.0825	1.0830	1.0843	1.0834	1.0615	1.0614	1.0614	1.0621	1.0621
1000	.7973	1.0303	1.0719	1.0858	1.0921	1.0953	1.0977	1.0988	1.0988	1.1001	1.1000	1.1001	1.1002	1.1012	1.1013
1500	.7973	.9954	1.0551	1.0749	1.0840	1.0883	1.0916	1.0931	1.0901	1.0956	1.0920	1.0926	1.0929	1.0939	1.0939
2000	.7973	.9638	1.0386	1.0642	1.0759	1.0819	1.0855	1.0878	1.0839	1.0911	1.0864	1.0872	1.0877	1.0887	1.0888
2500	.7973	.9355	1.0246	1.0540	1.0680	1.0752	1.0793	1.0821	1.0792	1.0859	1.0820	1.0830	1.0836	1.0847	1.0847
3000	.7973	.9082	1.0103	1.0454	1.0616	1.0697	1.0742	1.0774	1.0753	1.0816	1.0784	1.0796	1.0803	1.0814	1.0814
3500	.7973	.8833	.9980	1.0368	1.0551	1.0646	1.0698	1.0734	1.0720	1.0780	1.0754	1.0768	1.0775	1.0786	1.0787
4000	.7973	.8761	.9874	1.0293	1.0489	1.0596	1.0653	1.0695	1.0691	1.0746	1.0727	1.0743	1.0751	1.0762	1.0762
4500	.7973	.8761	.9759	1.0227	1.0435	1.0552	1.0614	1.0660	1.0666	1.0715	1.0704	1.0721	1.0730	1.0741	1.0741
5000	.7973	.8761	.9651	1.0168	1.0387	1.0512	1.0579	1.0628	1.0643	1.0687	1.0683	1.0701	1.0710	1.0721	1.0722
5500	.7973	.8761	.9553	1.0105	1.0343	1.0476	1.0547	1.0600	1.0623	1.0662	1.0665	1.0683	1.0693	1.0704	1.0705
6000	.7973	.8761	.9464	1.0038	1.0303	1.0444	1.0518	1.0574	1.0604	1.0639	1.0647	1.0667	1.0677	1.0689	1.0689
6500	.7973	.8761	.9370	.9977	1.0256	1.0414	1.0491	1.0550	1.0587	1.0618	1.0632	1.0652	1.0663	1.0674	1.0675
7000	.7973	.8761	.9281	.9920	1.0212	1.0379	1.0466	1.0528	1.0571	1.0599	1.0617	1.0638	1.0649	1.0661	1.0662
7500	.7973	.8761	.9194	.9867	1.0172	1.0345	1.0438	1.0505	1.0554	1.0581	1.0604	1.0625	1.0637	1.0648	1.0649
8000	.7973	.8761	.9109	.9817	1.0134	1.0313	1.0411	1.0481	1.0530	1.0562	1.0586	1.0610	1.0623	1.0635	1.0637
8500	.7973	.8761	.9075	.9771	1.0098	1.0284	1.0386	1.0459	1.0507	1.0544	1.0567	1.0592	1.0606	1.0619	1.0622
9000	.7973	.8761	.9075	.9725	1.0064	1.0256	1.0363	1.0438	1.0485	1.0528	1.0549	1.0575	1.0590	1.0604	1.0608
9500	.7973	.8761	.9075	.9676	1.0032	1.0230	1.0340	1.0419	1.0465	1.0512	1.0533	1.0559	1.0575	1.0590	1.0595
10000	.7973	.8761	.9075	.9629	1.0002	1.0205	1.0319	1.0400	1.0446	1.0497	1.0517	1.0544	1.0561	1.0577	1.0583
10500	.7973	.8761	.9075	.9584	.9973	1.0181	1.0299	1.0382	1.0428	1.0482	1.0502	1.0530	1.0548	1.0564	1.0571
11000	.7973	.8761	.9075	.9542	.9946	1.0158	1.0280	1.0365	1.0410	1.0469	1.0487	1.0516	1.0535	1.0552	1.0560
11500	.7973	.8761	.9075	.9497	.9918	1.0136	1.0262	1.0349	1.0393	1.0455	1.0474	1.0503	1.0523	1.0541	1.0549
12000	.7973	.8761	.9075	.9455	.9887	1.0116	1.0244	1.0334	1.0377	1.0443	1.0460	1.0491	1.0511	1.0530	1.0539
12500	.7973	.8761	.9075	.9414	.9857	1.0096	1.0228	1.0319	1.0362	1.0431	1.0448	1.0479	1.0500	1.0519	1.0529
13000	.7973	.8761	.9075	.9373	.9828	1.0077	1.0211	1.0304	1.0347	1.0419	1.0436	1.0467	1.0489	1.0509	1.0520
13500	.7973	.8761	.9075	.9332	.9801	1.0058	1.0196	1.0291	1.0333	1.0408	1.0424	1.0456	1.0478	1.0499	1.0511
14000	.7973	.8761	.9075	.9293	.9774	1.0036	1.0181	1.0277	1.0319	1.0398	1.0413	1.0445	1.0468	1.0490	1.0502
14500	.7973	.8761	.9075	.9254	.9748	1.0014	1.0166	1.0265	1.0306	1.0387	1.0402	1.0435	1.0459	1.0481	1.0494
15000	.7973	.8761	.9075	.9073	.9724	.9993	1.0153	1.0252	1.0293	1.0377	1.0391	1.0425	1.0449	1.0472	1.0485

Table 3 contains the sum of the continuous emission coefficients of hydrogen (column 6) with ratios of the contributions from H, H^-, H_2^+, and H_2^{quasi} [4] to this sum listed in columns 2, 3, 4, and 5 and the sum of the line wings in column 7. These coefficients are given for a temperature range from 8000 to 16000 K for the wavelengths given in column 1. The number at the right of the values in columns 6 and 7 is the power of 10 which multiplies the entry. The units are watts cm^{-3} $steradians^{-1}$ cm^{-1} (i.e., emission coefficient per steradian and per cm bandwidth). (See table 3 p. 299.)

4. Extension to Other Pressures

In order to make table 3 more useful, the constraint of a plasma pressure of 1 atm must be slightly modified. Because most one atmosphere plasma sources will vary with the barometric pressure (and thus its constituent densities), a parametric extrapolation equation was generated to take into account these small variations in pressure. The change of the sum of the emission coefficients (column 6) for a variation in pressure of up to ± 10 percent is given by:

$$\epsilon_\lambda = \epsilon_\lambda \text{ (table 3) } \{1 + (P-1)(1.379 + 2.776P + 1.388P^2 + 1.5\times 10^{-5}T + 6.22\times 10^{-10}T^2)\}, \qquad (6)$$

where P is the pressure in atmospheres and T is the temperature (K). This correction was accomplished by calculation of the emission coefficient at 0.9, 0.95, 1.0, 1.05, and 1.1 atm and fitting the relative deviation from the emission coefficient at 1 atm to the above polynomial. Use of the approximation results in an error of at most 1 percent in ϵ_λ.

5. Possible Corrections and Errors

One possible source of error in the total emission coefficient arises from uncertainties in the high density plasma corrections [10]. The principal error comes from the uncertainty in ΔE_i which appears in eq (1) and which is also inherent in the particle density determination. An example of the calculated difference in the total emission coefficient that can be expected by a choice of two very different values for high density plasma corrections is shown in table 4. Column A gives the emission coefficient for ΔE_i given by ref. [10] and column B for ΔE_i given by ref. [23]. The number in parenthesis is the power of 10 which multiplies the entry. Because ref. [10] is the only source of a consistent use of high-density corrections including Stark broadening calculations, and appears to be most consistent with experimental data [24], the ΔE_i of ref. [10] will be used throughout.

[4] Since ref. [7] gives absorption coefficients only for wavelengths greater than 1540 Å and temperatures below 10000 K, the quasi-molecular contribution is set equal to zero outside this range. Judging from a rough extrapolation of the absorption coefficient, this omission does not affect the estimated accuracy of ± 2 percent quoted in table 3 except for a wavelength between 1700 and 2000 Å in the temperature range 10500 to 12000 K. In this region, the omission of the quasi-molecular contribution introduces larger errors, but these are at most 3 percent.

All other sources of error such as unaccounted-for species, uncertainties in the contributing emission coefficients, Gaunt factors, interpolations, extrapolations, and calculational uncertainties are estimated to be less than ±2 percent for the visible and the near-ultraviolet spectral region.

TABLE 4. *Comparison of hydrogen emission coefficients for different* ΔE_i

Wavelength [Å]	ϵ_λ (Watts $cm^{-3}sr^{-1}cm^{-1}$) @ 13000 K		
	A. Ref. [23]	B. Ref. [10]	Percent difference
1500	2.415 (5)	2.489 (5)	3.0
2000	7.716 (5)	8.008 (5)	3.6
2500	1.394 (6)	1.453 (6)	4.1
3000	1.922 (6)	2.007 (6)	4.2

In the ultraviolet region below 1700 Å the accuracy of the important H_2^+ contribution is uncertain, and contributions from molecular H_2 lines, other quasi-molecular hydrogen states [17] and H^- at 1130 Å [15] are significant and cannot yet be taken into account. Because the line-wing correction is uncertain to 10 percent, the wavelength region where column 7 is greater than 15 percent of column 6 in table 3 must be excluded if a maximum of 2 percent uncertainty is placed on the total continuous emission coefficient. Experimental investigation should help to reduce the uncertainty of the total emission coefficient for all spectral regions within the scope of this calculation to approximately that of the visible and near-ultraviolet regions. Due to the appearance of the strongly broadened Balmer lines in the wavelength region between 3600 and 5100 Å, this region has been excluded from table 3 because it does not properly belong in a calculation of the continuous emission coefficient. The line profiles for H_β, H_γ, and H_δ, however, are quite well known [20, 21] and may be taken into account if needed. The next section of this paper is concerned solely with an adequate description of the intensity distribution in the Balmer limit region which extends from 3646 Å to as high as 4000 Å depending on the plasma electron density.

6. Intensity Distribution at Series Limits

At the ionization energy (see fig. 1), there occurs a transition between the free-bound and the bound-bound transitions in atomic hydrogen, which leads to the so-called Lyman, Balmer, Paschen, etc. limits. The treatment of these regions of the spectrum is complicated in high electron density plasmas by the Stark-broadening of bound levels and the lowering of the ionization potential. In an attempt to accurately describe these portions of the spectrum, attention was focused on the Balmer limit region because it is experimentally accessible. The calculated continuous in-

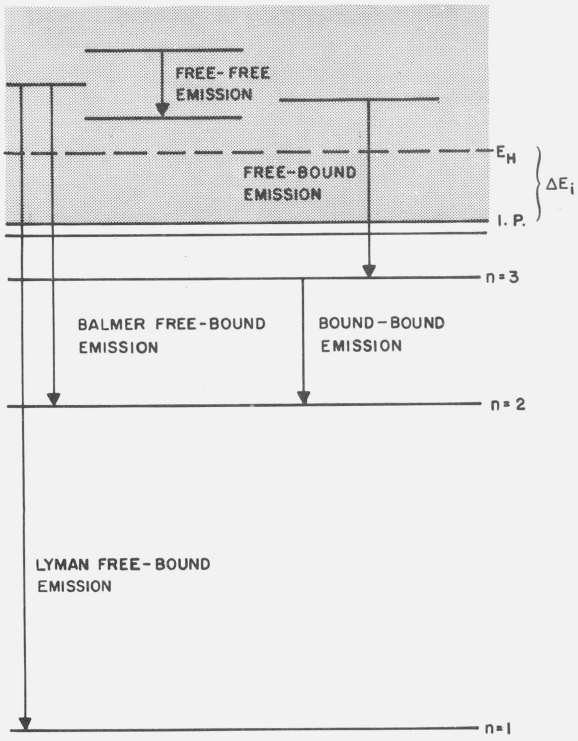

FIGURE 1. *A schematic energy level diagram of hydrogen.*

E_H is the unperturbed ionization energy, ΔE_i represents the amount of lowering of the ionization potential, and I.P. is the lowered ionization potential.

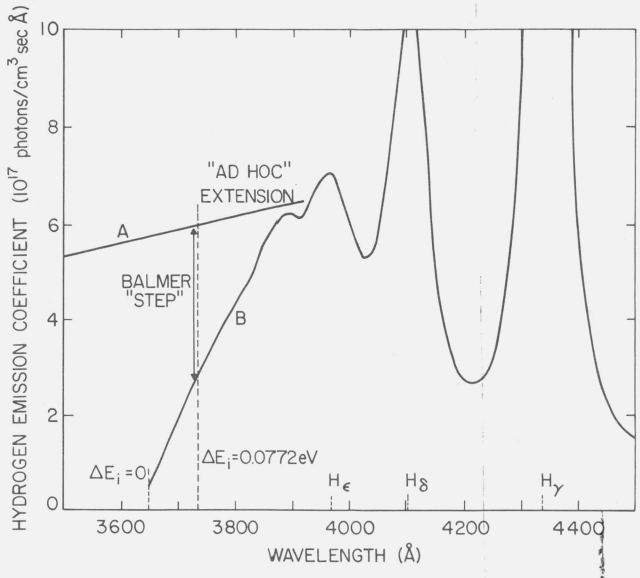

FIGURE 2. *The calculated spectral distribution of the total hydrogen emission coefficient in the region of the free-bound Balmer limit.*

The calculation is for a pure hydrogen plasma in LTE at 1 atm with $T=13000$ K, $N_e=8.9\times10^{-6}$ cm^{-3}, and $\Delta E_i=0.0772$ eV. Curve A represents the continuum calculated with $n_{min}=2$ in eq (1). Curve B represents the continuum calculated with $n_{min}=3$ in eq (1) plus the summed intensity of n_{max} Balmer lines. The dashed line represents the wavelength (for $\Delta E_i=0.0772$ eV) at which curve A should stop, unless it is extended by the "ad hoc" calculation.

tensity was added to the summed intensity of n_{max} (see sec. 3a) Balmer lines. Balmer line profiles for upper quantum numbers $n \geqslant 7$ were obtained from the quasistatic approximation [22] and for $n<7$ from ref. [20, 21]. As can be seen in figure 2, the intensity of the lines and underlying continuum does not match the intensity of the Balmer recombination continuum at the wavelength, predicted by ΔE_i [10], where the Balmer recombination continuum should stop contributing. The result is a discontinuity in the intensity distribution which is not observed experimentally (see fig. 4).

In addition to the observed smooth transition of intensity at the Balmer limit, it also follows from basic principles that oscillator strength is continuous across a series limit [25, 26]:

$$\frac{df_{E,n}}{dE}=1/2n'^3 f_{n'n} \tag{7}$$

where n represents the lower bound state, n' the upper bound state, and E is a continuum energy state. In order to calculate $df_{E,n}/dE$, it is defined in terms of the absorption cross section [25]:

$$\frac{df_{E,n}}{dE}=mc/\pi e^2\sigma_{E,n} \tag{8}$$

Where [27]

$$\sigma_{E,n}=\frac{2^4}{3\sqrt{3}}\frac{e^2}{mc}\frac{1}{n}\frac{E_H}{(E_H+n^2E)}\gamma_{fb}. \tag{9}$$

Figure 3 shows the discrete values versus wavelength of eq (7) lying on a curve extrapolated from the con-

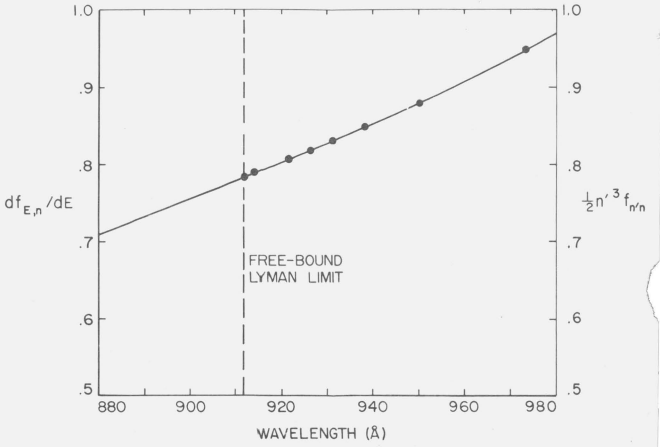

FIGURE 3. *Continuity of oscillator strength at the Lyman limit.*

The discrete values of $1/2n'^3 f_{n'n}$ versus wavelength are shown lying on a curve extrapolated from the continuum values of $df_{E,n}/dE$ versus wavelength using eq (8) and eq (9).

tinuum values of $df_{E,n}/dE$ versus wavelength using eq (8) and eq (9). As an example, this curve has been calculated for the Lyman limit. The same relations apply at the Balmer limit.

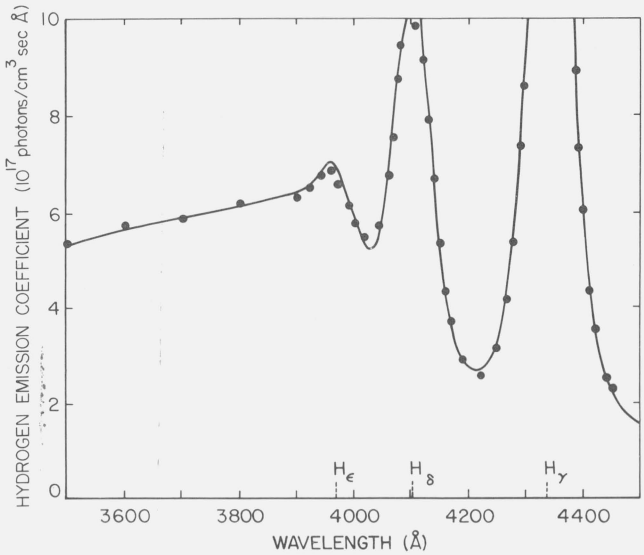

FIGURE 4. *The spectral distribution of the hydrogen emission coefficient in the region of the free-bound Balmer limit.*

The solid curve represents the "ad hoc" calculated emission coefficient and the · represents the measured emission coefficient. Both curves are for a pure hydrogen plasma in LTE at one atmosphere with $T=13000$ K and $N_e=8.9\times10^{16}$ cm^{-3}. $\Delta E_i=0.0772$ eV for the calculation.

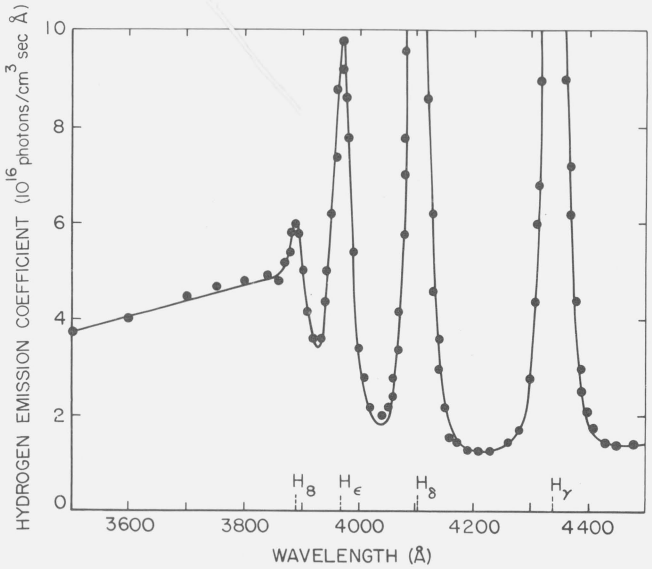

FIGURE 5. *The spectral distribution of the hydrogen emission coefficient in the region of the free-bound Balmer limit.*

The solid curve represents the "ad hoc" calculated emission coefficient and the · represents the measured emission coefficient. Both curves are for a pure hydrogen plasma in LTE at one atmosphere with $T=10200$ K and $N_e=1.87\times10^{16}$ cm^{-3}, $\Delta E_i=0.0397$ eV for the calculation.

To improve on the above-mentioned unsatisfactory calculation in the Balmer limit region, an "ad hoc" description was undertaken. The free-bound Balmer continuum was calculated beyond its predicted [10] wavelength limit by constraining $n_{\min}=2$ in eq (1) as the wavelength is increased. Simultaneously, the continuum for $n_{\min}=3$ plus the sum of $n_{\max}$ Stark broadened Balmer lines were calculated. The wavelength position is found where the two calculations match. This position is indicated in figure 2. For wavelengths below this position, the continuum is described by an "advanced" free-bound Balmer continuum. For higher wavelengths the continuum is described by the free-bound continuum with $n_{\min}=3$ plus the sum of the $n_{\max}$ Balmer lines. Two comparisons of the "ad hoc" calculation with experiment [24] in this transition region are shown in figure 4 for 13000 K and $N_e=8.9\times10^{16}$ cm^{-3}, and in figure 5 for 10200 K and $N_e=1.87\times10^{16}$ cm^{-3}. The purpose of the two comparisons is to show the good agreement of the "ad hoc" calculation and experiment as conditions are changed, expecially as regards the last discernible line (i.e. H_ϵ for 13000 K and H_8 for 10200 K).

In summary, it can be said that a straightforward application of the elementary Debye lowering theory [10] in calculating the intensity distribution in the transition region will result in a discontinuity in the intensity at the Balmer limit for high electron densities. No experimental evidence of such a "Balmer step" is obtained. The "ad hoc" calculation avoids this discontinuity and seems to be a satisfactory semiempirical method for obtaining the observed intensity over the range of electron densities in a hydrogen arc experiment [24].

7. Other Remarks

(a) Calculation of the total continuous emission coefficient for pressure outside the range 1.0 ± 0.1 atms.

Using table 3 and dividing each term as defined in eq (1) by its appropriate constituent density dependence (use Patch [11] at 1.0 atm), one obtains individual percentage component contributions independent of constituent densities. New constituent densities are then calculated at the new pressure and they are multiplied by their corresponding term of eq (1). Also, ΔE_i must be calculated from the new N_e. Care must be taken not to extend the use of table 3 this way to pressures where other constituents become important that are not included in eq (1), e.g., H_3^+ at high pressure and low temperature (see Patch [11]).

(b) Calculation of the total emission coefficient for temperatures outside the range of table 3.

For higher temperatures than 16000 K the major contribution is from the H continuum (greater than 95% at 16000 K), therefore only the first term of eq (1) need be considered, which is a straightforward calculation with the aid of Patch [11] for N_e, extrapolation of tables 1 and 2 for γ_{fb} and γ_{ff}, and section 3 (a) for $n_{\max}$ and ΔE_i. For lower temperatures

the situation becomes too complex due to significant contribution from processes dependent on various molecular species.

(c) The total emission coefficient below 900 Å.

At the onset of the Lyman recombination continuum at approximately 900 Å and for lower wavelengths, the emission coefficient increases drastically. For typical laboratory plasma lengths, i.e., a few mm depth or more, the total intensity becomes comparable to the blackbody limit at the same temperature. This would imply that for this length of laboratory plasma, the source is optically thick and therefore the continuum intensity is given by Planck's blackbody law in watts cm^{-2} $sterad^{-1}$ cm^{-1}

$$B(\lambda, T) = \frac{2c_1}{\lambda^5} \frac{10^{-7}}{e^{c_2/\lambda T} - 1} \tag{10}$$

where $c_1 = 2\pi hc^2$ (first radiation constant), $c_2 = 1.43879$ cm K (second radiation constant), λ = wavelength in cm, and T = temperature in K. Consequently, for wavelengths below 900 Å, these calculations apply only to very small plasmas where the spectral emission is optically thin.

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TABLE 3. ***Hydrogen emission coefficients for a one atmosphere plasma in LTE.***

Column 1.—Wavelength in Angströms.
Column 2.—Ratio of H continuum to column 6.
Column 3.—Ratio of H^- continuum to column 6.
Column 4.—Ratio of H_2^+ continuum to column 6.
Column 5.—Ratio of H_2^{quasi} continuum to column 6.
Column 6.—Sum of continuous emission coefficients of hydrogen in watts cm^{-3} $steradians^{-1}$ cm^{-1}.
Column 7.—Sum of the hydrogen line wings in watts cm^{-3} $steradians^{-1}$ cm^{-1}.

The number at the right of the values in columns 6 and 7 is the power of 10 which multiplies the entry. The estimated accuracy of column 6 is ±2 percent from 1700 Å to 8000 Å unless column 7 is greater than 15 percent of column 6. For this condition and for wavelengths outside this range a larger uncertainty must be placed on the total continuous emission coefficient.

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*
$T=8000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.9289−05	0.0000	1700	.146	.418	.181	.255	3.2455+02	1.0844+00
420	1.000	.000	.000	.000	1.4806−04	0.0000	1720	.151	.425	.182	.242	3.4587+02	9.8212−01
440	1.000	.000	.000	.000	9.3988−04	0.0000	1740	.157	.432	.182	.229	3.6781+02	8.9288−01
460	1.000	.000	.000	.000	5.0594−03	0.0000	1760	.162	.439	.183	.216	3.9036+02	8.1464−01
480	1.000	.000	.000	.000	2.3579−02	0.0000	1780	.168	.446	.183	.204	4.1351+02	7.4572−01
500	1.000	.000	.000	.000	9.6818−02	0.0000	1800	.173	.453	.183	.191	4.3727+02	6.8472−01
520	1.000	.000	.000	.000	3.5544−01	0.0000	1820	.179	.460	.183	.179	4.6164+02	6.3051−01
540	1.000	.000	.000	.000	1.1815+00	0.0000	1840	.185	.467	.182	.166	4.8660+02	5.8216−01
560	1.000	.000	.000	.000	3.5942+00	0.0000	1860	.190	.474	.181	.155	5.1220+02	5.3886−01
580	1.000	.000	.000	.000	1.0100+01	0.0000	1880	.196	.480	.181	.143	5.3844+02	4.9995−01
600	1.000	.000	.000	.000	2.6427+01	0.0000	1900	.202	.487	.180	.132	5.6536+02	4.6488−01
620	1.000	.000	.000	.000	6.4840+01	0.0000	1920	.208	.493	.178	.121	5.9300+02	4.3318−01
640	1.000	.000	.000	.000	1.5008+02	0.0000	1940	.214	.499	.177	.110	6.2138+02	4.0443−01
660	1.000	.000	.000	.000	3.2951+02	0.0000	1960	.220	.505	.175	.100	6.5056+02	3.7830−01
680	1.000	.000	.000	.000	6.8941+02	0.0000	1980	.225	.510	.174	.091	6.8058+02	3.5447−01
700	1.000	.000	.000	.000	1.3804+03	0.0000	2000	.231	.515	.172	.082	7.1152+02	3.3271−01
720	1.000	.000	.000	.000	2.6547+03	0.0000	2020	.236	.519	.171	.074	7.4456+02	3.1277−01
740	1.000	.000	.000	.000	4.9087+03	0.0000	2040	.241	.521	.169	.069	7.8110+02	2.9447−01
760	1.000	.000	.000	.000	8.7551+03	0.0000	2060	.245	.524	.168	.063	8.1759+02	2.7765−01
780	1.000	.000	.000	.000	1.5135+04	0.0000	2080	.250	.526	.167	.058	8.5520+02	2.6214−01
800	1.000	.000	.000	.000	2.5418+04	0.0000	2100	.254	.528	.165	.053	8.9394+02	2.4782−01
820	1.000	.000	.000	.000	4.1561+04	0.0000	2120	.259	.529	.163	.049	9.3379+02	2.3458−01
840	1.000	.000	.000	.000	6.6264+04	0.0000	2140	.263	.530	.162	.045	9.7474+02	2.2231−01
860	1.000	.000	.000	.000	1.0324+05	0.0000	2160	.267	.532	.160	.041	1.0168+03	2.1092−01
880	1.000	.000	.000	.000	1.5745+05	0.0000	2180	.271	.532	.158	.038	1.0599+03	2.0034−01
900	1.000	.000	.000	.000	2.3532+05	0.0000	2200	.275	.533	.156	.036	1.1040+03	1.9048−01
920	.095	.753	.152	.000	2.2884−01	4.7013+01	2220	.279	.534	.154	.033	1.1491+03	1.8130−01
940	.094	.722	.184	.000	3.3351−01	4.9164+02	2240	.283	.534	.152	.031	1.1952+03	1.7272−01
960	.093	.689	.218	.000	4.8039−01	7.6824+02	2260	.287	.534	.150	.029	1.2423+03	1.6470−01
980	.092	.656	.252	.000	6.8392−01	1.3605+03	2280	.291	.534	.148	.027	1.2902+03	1.5720−01
1000	.091	.623	.286	.000	9.6215−01	2.2753+02	2300	.295	.534	.146	.025	1.3390+03	1.5016−01
1020	.089	.592	.319	.000	1.3370+00	6.9701+03	2320	.298	.534	.144	.024	1.3886+03	1.4356−01
1040	.088	.563	.349	.000	1.8340+00	7.0643+02	2340	.302	.534	.142	.022	1.4390+03	1.3736−01
1060	.086	.537	.377	.000	2.4821+00	1.0021+02	2360	.306	.534	.140	.021	1.4901+03	1.3153−01
1080	.085	.513	.402	.000	3.3125+00	5.1703+01	2380	.310	.535	.138	.017	1.5376+03	1.2604−01
1100	.084	.493	.423	.000	4.3578+00	4.7998+01	2400	.314	.534	.136	.016	1.5898+03	1.2087−01
1120	.084	.475	.441	.000	5.6497+00	6.2347+01	2420	.317	.534	.134	.015	1.6428+03	1.1599−01
1140	.084	.461	.455	.000	7.2180+00	1.0169+02	2440	.321	.533	.132	.014	1.6966+03	1.1138−01
1160	.084	.451	.465	.000	9.0881+00	2.0957+02	2460	.324	.533	.130	.013	1.7510+03	1.0703−01
1180	.085	.443	.472	.000	1.1280+01	6.2994+02	2480	.328	.532	.128	.012	1.8061+03	1.0291−01
1200	.087	.438	.475	.000	1.3808+01	4.9979+03	2500	.331	.531	.126	.012	1.8619+03	9.9006−02
1220	.089	.436	.476	.000	1.6678+01	1.2170+05	2520	.335	.530	.124	.011	1.9182+03	9.5309−02
1240	.091	.436	.473	.000	1.9892+01	1.6485+03	2540	.338	.530	.122	.011	1.9750+03	9.1803−02
1260	.094	.438	.467	.000	2.3445+01	3.6462+02	2560	.342	.529	.120	.010	2.0324+03	8.8476−02
1280	.098	.443	.459	.000	2.7329+01	1.4496+02	2580	.345	.528	.118	.010	2.0903+03	8.5315−02
1300	.102	.450	.448	.000	3.1534+01	7.4875+01	2600	.348	.527	.116	.009	2.1487+03	8.2310−02
1320	.106	.458	.435	.000	3.6053+01	4.4773+01	2620	.351	.525	.114	.009	2.2075+03	7.9452−02
1340	.112	.468	.420	.000	4.0879+01	2.9370+01	2640	.354	.524	.112	.009	2.2669+03	7.6731−02
1360	.117	.480	.403	.000	4.6014+01	2.0530+01	2660	.358	.523	.111	.008	2.3266+03	7.4138−02
1380	.123	.492	.385	.000	5.1462+01	1.5030+01	2680	.361	.522	.109	.008	2.3867+03	7.1667−02
1400	.129	.505	.366	.000	5.7239+01	1.1399+01	2700	.364	.521	.107	.008	2.4472+03	6.9310−02
1420	.136	.519	.346	.000	6.3366+01	8.8902+00	2720	.367	.520	.106	.008	2.5080+03	6.7061−02
1440	.142	.532	.325	.000	6.9871+01	7.0922+00	2740	.370	.518	.104	.008	2.5690+03	6.4912−02
1460	.149	.546	.304	.000	7.6790+01	5.7653+00	2760	.372	.516	.105	.007	2.6368+03	6.2858−02
1480	.156	.560	.284	.000	8.4165+01	4.7619+00	2780	.375	.514	.103	.007	2.6985+03	6.0895−02
1500	.164	.572	.264	.000	9.2042+01	3.9872+00	2800	.378	.513	.102	.007	2.7603+03	5.9016−02
1520	.167	.571	.263	.000	1.0289+02	3.3783+00	2820	.381	.512	.100	.007	2.8222+03	5.7218−02
1540	.170	.569	.261	.000	1.1461+02	2.8922+00	2840	.386	.512	.099	.003	2.8757+03	5.5496−02
1560	.114	.373	.171	.343	1.9367+02	2.4989+00	2860	.389	.510	.098	.003	2.9379+03	5.3845−02
1580	.118	.379	.173	.331	2.1029+02	2.1768+00	2880	.392	.509	.096	.003	3.0002+03	5.2262−02
1600	.122	.385	.174	.318	2.2763+02	1.9101+00	2900	.394	.508	.095	.003	3.0627+03	5.0744−02
1620	.127	.391	.176	.306	2.4567+02	1.6871+00	2920	.397	.506	.094	.003	3.1252+03	4.9287−02
1640	.131	.398	.178	.293	2.6440+02	1.4991+00	2940	.400	.505	.092	.003	3.1877+03	4.7888−02
1660	.136	.405	.179	.280	2.8380+02	1.3393+00	2960	.403	.503	.091	.003	3.2503+03	4.6544−02
1680	.141	.411	.180	.267	3.0386+02	1.2024+00	2980	.406	.502	.090	.003	3.3129+03	4.5253−02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE* — Continued

$T = 8000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.409	.500	.088	.003	3.3755+03	4.4011−02	8600	.045	.904	.050	.000	1.3922+03	1.2808+02
3020	.413	.500	.087	.000	3.4293+03	4.2816−02	8700	.047	.903	.050	.000	1.3543+03	1.5024+02
3040	.416	.498	.086	.000	3.4917+03	4.1666−02	8800	.048	.902	.050	.000	1.3173+03	1.4742+02
3060	.419	.497	.085	.000	3.5540+03	4.0559−02	8900	.049	.901	.050	.000	1.2810+03	1.3992+02
3080	.421	.495	.084	.000	3.6163+03	3.9493−02	9000	.051	.900	.049	.000	1.2456+03	2.2051+02
3100	.424	.493	.082	.000	3.6784+03	3.8465−02	9100	.052	.899	.049	.000	1.2108+03	6.9686+01
3120	.427	.492	.081	.000	3.7404+03	3.7475−02	9200	.054	.897	.049	.000	1.1769+03	2.6695+02
3140	.430	.490	.080	.000	3.8022+03	3.6520−02	9300	.055	.896	.049	.000	1.1437+03	8.3569+01
3160	.433	.489	.079	.000	3.8638+03	3.5599−02	9400	.057	.895	.049	.000	1.1114+03	2.4811+01
3180	.435	.487	.078	.000	3.9251+03	3.4710−02	9500	.058	.893	.049	.000	1.0798+03	2.2336+02
3200	.438	.485	.077	.000	3.9862+03	3.3852−02	9600	.060	.892	.048	.000	1.0489+03	1.6498+02
3220	.441	.484	.075	.000	4.0472+03	3.3023−02	9700	.061	.890	.048	.000	1.0188+03	1.5070+01
3240	.443	.482	.074	.000	4.1079+03	3.2223−02	9800	.063	.889	.048	.000	9.8950+02	8.2258+00
3260	.446	.481	.073	.000	4.1684+03	3.1449−02	9900	.065	.887	.048	.000	9.6090+02	1.6871+01
3280	.449	.479	.072	.000	4.2286+03	3.0702−02	10000	.067	.886	.048	.000	9.3302+02	2.5191+02
3300	.451	.477	.071	.000	4.2886+03	2.9978−02	10100	.068	.884	.047	.000	9.0582+02	2.3854+02
3320	.454	.476	.070	.000	4.3483+03	2.9279−02	10200	.070	.883	.047	.000	8.7931+02	1.5291+01
3340	.457	.474	.069	.000	4.4078+03	2.8602−02	10300	.072	.881	.047	.000	8.5351+02	4.8415+00
3360	.459	.472	.068	.000	4.4670+03	2.7947−02	10400	.074	.879	.047	.000	8.2839+02	2.7345+00
3380	.462	.471	.067	.000	4.5259+03	2.7313−02	10500	.076	.878	.046	.000	8.0394+02	2.3465+00
3400	.464	.469	.066	.000	4.5844+03	2.6698−02	10600	.078	.876	.046	.000	7.8014+02	3.0174+00
3420	.467	.467	.066	.000	4.6426+03	2.6103−02	10700	.080	.874	.046	.000	7.5700+02	6.0420+00
3440	.469	.466	.065	.000	4.7005+03	2.5527−02	10800	.082	.872	.045	.000	7.3449+02	2.2321+01
3460	.472	.464	.064	.000	4.7581+03	2.4968−02	10900	.085	.870	.045	.000	7.1261+02	5.9942+02
3480	.475	.462	.063	.000	4.8154+03	2.4426−02	11000	.087	.868	.045	.000	6.9133+02	1.8192+02
3500	.477	.461	.062	.000	4.8723+03	2.3900−02	11100	.089	.865	.046	.000	6.7205+02	1.4837+01
3520	.478	.458	.064	.000	4.9413+03	2.3390−02	11200	.092	.862	.046	.000	6.5212+02	4.5196+00
3540	.481	.456	.063	.000	4.9979+03	2.2895−02	11300	.094	.860	.046	.000	6.3277+02	2.0994+00
3560	.483	.455	.062	.000	5.0540+03	2.2415−02	11400	.097	.857	.046	.000	6.1429+02	1.2359+00
3580	.486	.453	.061	.000	5.1097+03	2.1949−02	11500	.099	.855	.046	.000	5.9607+02	8.4811−01
5100	.051	.874	.075	.000	3.0444+03	3.0952+00	11600	.102	.852	.046	.000	5.7841+02	6.5303−01
5200	.053	.874	.073	.000	3.0182+03	1.5542+00	11700	.105	.849	.046	.000	5.6128+02	5.5384−01
5300	.055	.874	.071	.000	2.9885+03	9.9801−01	11800	.107	.847	.046	.000	5.4467+02	5.1295−01
5400	.057	.874	.070	.000	2.9558+03	7.3808−01	11900	.110	.844	.046	.000	5.2858+02	5.1704−01
5500	.059	.874	.068	.000	2.9204+03	6.0207−01	12000	.113	.841	.046	.000	5.1299+02	5.6687−01
5600	.061	.873	.066	.000	2.8827+03	5.3275−01	12100	.116	.838	.046	.000	4.9785+02	6.7705−01
5700	.063	.872	.065	.000	2.8431+03	5.0986−01	12200	.119	.835	.046	.000	4.8320+02	8.8497−01
5800	.065	.872	.064	.000	2.8020+03	5.3042−01	12300	.122	.832	.046	.000	4.6901+02	1.2792+00
5900	.067	.871	.062	.000	2.7592+03	6.0605−01	12400	.125	.829	.046	.000	4.5527+02	2.0913+00
6000	.069	.870	.061	.000	2.7152+03	7.7150−01	12500	.128	.826	.046	.000	4.4198+02	4.0586+00
6100	.071	.869	.060	.000	2.6707+03	1.1164+00	12600	.131	.823	.046	.000	4.2913+02	1.0493+01
6200	.073	.868	.059	.000	2.6253+03	1.8988+00	12700	.134	.819	.046	.000	4.1669+02	5.0046+01
6300	.076	.866	.058	.000	2.5791+03	4.0660+00	12800	.138	.816	.047	.000	4.0467+02	4.4947+03
6400	.078	.865	.057	.000	2.5324+03	1.3119+01	12900	.141	.812	.047	.000	3.9305+02	1.2933+02
6500	.080	.863	.057	.000	2.4852+03	1.3603+02	13000	.144	.809	.047	.000	3.8182+02	1.6658+01
6600	.083	.861	.056	.000	2.4374+03	4.8694+02	13100	.148	.805	.047	.000	3.7094+02	5.4450+00
6700	.085	.860	.055	.000	2.3896+03	1.9967+01	13200	.151	.802	.047	.000	3.6044+02	2.5431+00
6800	.087	.858	.055	.000	2.3419+03	5.1665+00	13300	.155	.798	.047	.000	3.5030+02	1.4333+00
6900	.090	.856	.054	.000	2.2941+03	2.1791+00	13400	.158	.794	.047	.000	3.4052+02	9.0749−01
7000	.092	.854	.053	.000	2.2464+03	1.1638+00	13500	.162	.791	.047	.000	3.3108+02	6.2216−01
7100	.095	.852	.053	.000	2.1988+03	7.1567−01	13600	.166	.787	.048	.000	3.2198+02	4.5205−01
7200	.098	.850	.052	.000	2.1514+03	4.8340−01	13700	.169	.783	.048	.000	3.1322+02	3.4335−01
7300	.100	.848	.051	.000	2.1042+03	3.4906−01	13800	.173	.779	.048	.000	3.0477+02	2.7009−01
7400	.103	.846	.051	.000	2.0576+03	2.6487−01	13900	.177	.775	.048	.000	2.9663+02	2.1858−01
7500	.106	.844	.050	.000	2.0114+03	2.0875−01	14000	.181	.771	.048	.000	2.8880+02	1.8112−01
7600	.109	.842	.050	.000	1.9658+03	1.6949−01	14100	.184	.765	.051	.000	2.8178+02	1.5310−01
7700	.112	.839	.049	.000	1.9207+03	1.4092−01	14200	.188	.761	.051	.000	2.7444+02	1.3164−01
7800	.115	.837	.049	.000	1.8763+03	1.1944−01	14300	.192	.757	.051	.000	2.6739+02	1.1489−01
7900	.118	.834	.048	.000	1.8325+03	1.0284−01	14400	.196	.753	.051	.000	2.6061+02	1.0160−01
8000	.121	.832	.047	.000	1.7893+03	8.9719−02	14500	.200	.749	.051	.000	2.5410+02	9.0902−02
8100	.124	.829	.047	.000	1.7469+03	7.9140−02	14600	.203	.746	.051	.000	2.4832+02	1.2669+00
8200	.127	.826	.047	.000	1.7052+03	7.0465−02	14700	.207	.742	.051	.000	2.4216+02	1.6069+00
8300	.042	.907	.051	.000	1.5105+03	2.2510+01	14800	.210	.739	.051	.000	2.3624+02	2.0784+00
8400	.043	.906	.051	.000	1.4702+03	5.6172+01	14900	.138	.806	.056	.000	2.1029+02	2.7281+00
8500	.044	.905	.050	.000	1.4308+03	9.4956+01	15000	.141	.803	.056	.000	2.0505+02	3.6073+00

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=8500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	2.5455−04	0.0000	1700	.231	.430	.175	.163	8.6089+02	4.4605+00
420	1.000	.000	.000	.000	1.7226−03	0.0000	1720	.237	.434	.175	.154	9.1873+02	4.0413+00
440	1.000	.000	.000	.000	9.7522−03	0.0000	1740	.243	.437	.174	.145	9.7846+02	3.6755+00
460	1.000	.000	.000	.000	4.7286−02	0.0000	1760	.250	.441	.173	.137	1.0401+03	3.3546+00
480	1.000	.000	.000	.000	2.0024−01	0.0000	1780	.256	.444	.172	.128	1.1035+03	3.0719+00
500	1.000	.000	.000	.000	7.5280−01	0.0000	1800	.262	.447	.171	.120	1.1689+03	2.8215+00
520	1.000	.000	.000	.000	2.5477+00	0.0000	1820	.269	.450	.169	.112	1.2361+03	2.5990+00
540	1.000	.000	.000	.000	7.8539+00	0.0000	1840	.275	.454	.168	.104	1.3051+03	2.4004+00
560	1.000	.000	.000	.000	2.2278+01	0.0000	1860	.282	.457	.166	.096	1.3760+03	2.2225+00
580	1.000	.000	.000	.000	5.8654+01	0.0000	1880	.288	.459	.164	.088	1.4488+03	2.0626+00
600	1.000	.000	.000	.000	1.4442+02	0.0000	1900	.294	.462	.162	.081	1.5236+03	1.9184+00
620	1.000	.000	.000	.000	3.3475+02	0.0000	1920	.301	.465	.160	.074	1.6003+03	1.7881+00
640	1.000	.000	.000	.000	7.3460+02	0.0000	1940	.307	.467	.158	.067	1.6791+03	1.6698+00
660	1.000	.000	.000	.000	1.5340+03	0.0000	1960	.313	.470	.156	.061	1.7601+03	1.5623+00
680	1.000	.000	.000	.000	3.0617+03	0.0000	1980	.319	.472	.154	.055	1.8432+03	1.4642+00
700	1.000	.000	.000	.000	5.8637+03	0.0000	2000	.326	.473	.151	.050	1.9285+03	1.3746+00
720	1.000	.000	.000	.000	1.0814+04	0.0000	2020	.331	.474	.150	.045	2.0188+03	1.2925+00
740	1.000	.000	.000	.000	1.9216+04	0.0000	2040	.336	.474	.148	.042	2.1155+03	1.2172+00
760	1.000	.000	.000	.000	3.3008+04	0.0000	2060	.341	.474	.146	.038	2.2129+03	1.1479+00
780	1.000	.000	.000	.000	5.5060+04	0.0000	2080	.346	.474	.145	.035	2.3128+03	1.0840+00
800	1.000	.000	.000	.000	8.9387+04	0.0000	2100	.351	.474	.143	.032	2.4152+03	1.0250+00
820	1.000	.000	.000	.000	1.4152+05	0.0000	2120	.355	.474	.141	.030	2.5201+03	9.7037−01
840	1.000	.000	.000	.000	2.1881+05	0.0000	2140	.360	.473	.139	.027	2.6274+03	9.1977−01
860	1.000	.000	.000	.000	3.3107+05	0.0000	2160	.364	.473	.137	.025	2.7370+03	8.7281−01
880	1.000	.000	.000	.000	4.9097+05	0.0000	2180	.369	.472	.136	.023	2.8490+03	8.2915−01
900	1.000	.000	.000	.000	7.1447+05	0.0000	2200	.373	.471	.134	.022	2.9632+03	7.8849−01
920	.140	.721	.140	.000	1.1026+00	2.3636+02	2220	.378	.471	.132	.020	3.0796+03	7.5058−01
940	.140	.693	.167	.000	1.5627+00	2.5461+03	2240	.382	.470	.130	.019	3.1981+03	7.1518−01
960	.139	.665	.196	.000	2.1893+00	3.9286+03	2260	.386	.469	.128	.017	3.3186+03	6.8208−01
980	.138	.636	.226	.000	3.0323+00	6.8890+03	2280	.390	.468	.126	.016	3.4410+03	6.5110−01
1000	.136	.608	.256	.000	4.1521+00	1.0951+03	2300	.394	.466	.124	.015	3.5654+03	6.2205−01
1020	.135	.581	.284	.000	5.6191+00	3.3375+04	2320	.398	.465	.122	.014	3.6914+03	5.9479−01
1040	.133	.556	.311	.000	7.5131+00	3.3682+03	2340	.402	.464	.120	.013	3.8191+03	5.6918−01
1060	.132	.532	.336	.000	9.9212+00	4.6578+02	2360	.406	.463	.118	.013	3.9484+03	5.4509−01
1080	.131	.512	.358	.000	1.2935+01	2.3004+02	2380	.411	.462	.116	.011	4.0740+03	5.2241−01
1100	.130	.493	.377	.000	1.6645+01	2.0435+02	2400	.415	.461	.115	.010	4.2061+03	5.0103−01
1120	.130	.478	.392	.000	2.1138+01	2.5820+02	2420	.419	.460	.113	.009	4.3397+03	4.8086−01
1140	.130	.465	.405	.000	2.6493+01	4.1580+02	2440	.423	.458	.111	.009	4.4748+03	4.6181−01
1160	.131	.455	.414	.000	3.2774+01	8.5343+02	2460	.426	.457	.109	.008	4.6114+03	4.4380−01
1180	.133	.447	.420	.000	4.0028+01	2.5651+03	2480	.430	.455	.107	.008	4.7493+03	4.2677−01
1200	.135	.442	.423	.000	4.8287+01	2.0331+04	2500	.434	.454	.105	.007	4.8885+03	4.1063−01
1220	.138	.439	.423	.000	5.7562+01	4.9294+05	2520	.437	.452	.104	.007	5.0289+03	3.9534−01
1240	.141	.439	.420	.000	6.7851+01	6.7116+03	2540	.441	.451	.102	.006	5.1701+03	3.8084−01
1260	.146	.440	.414	.000	7.9138+01	1.4830+03	2560	.445	.449	.100	.006	5.3122+03	3.6707−01
1280	.150	.443	.406	.000	9.1401+01	5.8854+02	2580	.448	.448	.098	.006	5.4554+03	3.5399−01
1300	.156	.448	.396	.000	1.0462+02	3.0365+02	2600	.452	.446	.097	.006	5.5996+03	3.4156−01
1320	.162	.454	.384	.000	1.1876+02	1.8151+02	2620	.455	.444	.095	.005	5.7446+03	3.2973−01
1340	.169	.461	.370	.000	1.3383+02	1.1911+02	2640	.458	.443	.094	.005	5.8905+03	3.1846−01
1360	.176	.469	.355	.000	1.4983+02	8.3321+01	2660	.462	.441	.092	.005	6.0371+03	3.0773−01
1380	.184	.478	.338	.000	1.6678+02	6.1063+01	2680	.465	.439	.091	.005	6.1845+03	2.9750−01
1400	.192	.488	.321	.000	1.8472+02	4.6364+01	2700	.468	.438	.089	.005	6.3325+03	2.8774−01
1420	.200	.498	.302	.000	2.0372+02	3.6200+01	2720	.472	.436	.088	.005	6.4812+03	2.7843−01
1440	.209	.507	.284	.000	2.2384+02	2.8912+01	2740	.475	.434	.086	.004	6.6303+03	2.6953−01
1460	.217	.517	.266	.000	2.4520+02	2.3528+01	2760	.477	.432	.087	.004	6.7928+03	2.6102−01
1480	.226	.526	.248	.000	2.6789+02	1.9452+01	2780	.480	.430	.086	.004	6.9431+03	2.5289−01
1500	.235	.535	.230	.000	2.9203+02	1.6302+01	2800	.484	.428	.084	.004	7.0936+03	2.4511−01
1520	.239	.532	.229	.000	3.2402+02	1.3824+01	2820	.487	.426	.083	.004	7.2441+03	2.3766−01
1540	.243	.530	.227	.000	3.5832+02	1.1844+01	2840	.491	.425	.082	.002	7.3839+03	2.3052−01
1560	.191	.408	.175	.226	5.1061+02	1.0241+01	2860	.494	.424	.081	.002	7.5349+03	2.2368−01
1580	.196	.411	.175	.217	5.5464+02	8.9266+00	2880	.497	.422	.079	.002	7.6859+03	2.1712−01
1600	.202	.414	.176	.208	6.0072+02	7.8376+00	2900	.500	.420	.078	.002	7.8370+03	2.1083−01
1620	.207	.417	.176	.199	6.4881+02	6.9266+00	2920	.503	.418	.077	.002	7.9881+03	2.0479−01
1640	.213	.420	.176	.190	6.9889+02	6.1578+00	2940	.506	.417	.076	.002	8.1392+03	1.9899−01
1660	.219	.424	.176	.181	7.5095+02	5.5039+00	2960	.509	.415	.075	.002	8.2902+03	1.9342−01
1680	.225	.427	.176	.172	8.0496+02	4.9437+00	2980	.512	.413	.074	.002	8.4410+03	1.8806−01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=8500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.515	.411	.073	.002	8.5917+03	1.8291−01	8600	.084	.865	.051	.000	2.4851+03	3.2692+02
3020	.518	.410	.072	.000	8.7282+03	1.7796−01	8700	.086	.863	.051	.000	2.4187+03	4.1993+02
3040	.521	.408	.070	.000	8.8782+03	1.7319−01	8800	.088	.861	.050	.000	2.3538+03	4.5172+02
3060	.524	.406	.069	.000	9.0280+03	1.6860−01	8900	.091	.859	.050	.000	2.2905+03	4.3561+02
3080	.527	.405	.068	.000	9.1774+03	1.6417−01	9000	.093	.857	.050	.000	2.2286+03	5.1189+02
3100	.530	.403	.067	.000	9.3263+03	1.5991−01	9100	.095	.855	.049	.000	2.1681+03	3.1163+02
3120	.533	.401	.066	.000	9.4749+03	1.5580−01	9200	.098	.853	.049	.000	2.1091+03	6.8453+02
3140	.535	.399	.065	.000	9.6229+03	1.5184−01	9300	.100	.851	.049	.000	2.0516+03	3.4391+02
3160	.538	.397	.064	.000	9.7701+03	1.4802−01	9400	.103	.848	.049	.000	1.9955+03	1.3746+02
3180	.541	.396	.063	.000	9.9166+03	1.4433−01	9500	.105	.846	.048	.000	1.9408+03	7.6791+02
3200	.544	.394	.062	.000	1.0063+04	1.4077−01	9600	.108	.844	.048	.000	1.8875+03	6.2884+02
3220	.546	.392	.062	.000	1.0208+04	1.3733−01	9700	.111	.841	.048	.000	1.8356+03	8.3200+01
3240	.549	.390	.061	.000	1.0353+04	1.3401−01	9800	.114	.839	.048	.000	1.7850+03	4.4738+01
3260	.552	.389	.060	.000	1.0497+04	1.3080−01	9900	.116	.836	.047	.000	1.7358+03	9.3519+01
3280	.554	.387	.059	.000	1.0640+04	1.2770−01	10000	.119	.834	.047	.000	1.6879+03	1.0346+03
3300	.557	.385	.058	.000	1.0783+04	1.2470−01	10100	.122	.831	.047	.000	1.6411+03	9.9461+02
3320	.559	.383	.057	.000	1.0925+04	1.2179−01	10200	.125	.828	.046	.000	1.5956+03	8.4812+01
3340	.562	.382	.056	.000	1.1066+04	1.1898−01	10300	.128	.826	.046	.000	1.5514+03	2.5991+01
3360	.565	.380	.056	.000	1.1207+04	1.1626−01	10400	.132	.823	.046	.000	1.5084+03	1.4750+01
3380	.567	.378	.055	.000	1.1346+04	1.1363−01	10500	.135	.820	.045	.000	1.4665+03	1.2701+01
3400	.570	.376	.054	.000	1.1485+04	1.1108−01	10600	.138	.817	.045	.000	1.4258+03	1.6341+01
3420	.572	.375	.053	.000	1.1623+04	1.0861−01	10700	.141	.814	.044	.000	1.3863+03	3.2263+01
3440	.575	.373	.053	.000	1.1760+04	1.0621−01	10800	.145	.811	.044	.000	1.3478+03	1.2184+02
3460	.577	.371	.052	.000	1.1896+04	1.0389−01	10900	.148	.808	.044	.000	1.3104+03	2.4129+03
3480	.579	.369	.051	.000	1.2031+04	1.0164−01	11000	.152	.805	.043	.000	1.2741+03	9.3644+02
3500	.582	.368	.050	.000	1.2166+04	9.9456−02	11100	.155	.800	.045	.000	1.2414+03	8.0107+01
3520	.583	.365	.052	.000	1.2323+04	9.7338−02	11200	.159	.797	.044	.000	1.2074+03	2.4208+01
3540	.586	.364	.051	.000	1.2456+04	9.5283−02	11300	.162	.794	.044	.000	1.1745+03	1.1339+01
3560	.588	.362	.050	.000	1.2588+04	9.3288−02	11400	.167	.789	.044	.000	1.1436+03	6.6132+00
3580	.590	.360	.050	.000	1.2720+04	9.1351−02	11500	.171	.786	.044	.000	1.1126+03	4.5079+00
5100	.089	.837	.074	.000	5.7986+03	1.5071+01	11600	.174	.782	.044	.000	1.0825+03	3.4542+00
5200	.092	.835	.073	.000	5.7363+03	7.3620+00	11700	.178	.778	.044	.000	1.0533+03	2.9183+00
5300	.095	.834	.071	.000	5.6688+03	4.6184+00	11800	.182	.774	.043	.000	1.0251+03	2.6945+00
5400	.098	.832	.069	.000	5.5966+03	3.3574+00	11900	.186	.771	.043	.000	9.9766+02	2.7095+00
5500	.102	.831	.068	.000	5.5205+03	2.7097+00	12000	.190	.767	.043	.000	9.7111+02	2.9660+00
5600	.105	.829	.066	.000	5.4412+03	2.3878+00	12100	.194	.763	.043	.000	9.4534+02	3.5403+00
5700	.108	.827	.065	.000	5.3592+03	2.2899+00	12200	.199	.759	.043	.000	9.2039+02	4.6301+00
5800	.112	.825	.063	.000	5.2754+03	2.3999+00	12300	.203	.754	.043	.000	8.9622+02	6.7061+00
5900	.115	.823	.062	.000	5.1894+03	2.7725+00	12400	.207	.750	.043	.000	8.7282+02	1.1009+01
6000	.119	.821	.060	.000	5.1020+03	3.5737+00	12500	.211	.746	.043	.000	8.5017+02	2.1534+01
6100	.122	.818	.059	.000	5.0142+03	5.2316+00	12600	.216	.742	.042	.000	8.2825+02	5.5485+01
6200	.126	.816	.059	.000	4.9256+03	8.9779+00	12700	.220	.737	.042	.000	8.0704+02	2.6720+02
6300	.129	.813	.058	.000	4.8362+03	1.9330+01	12800	.225	.733	.042	.000	7.8652+02	1.4114+04
6400	.133	.810	.057	.000	4.7465+03	6.2488+01	12900	.229	.729	.042	.000	7.6667+02	6.9836+02
6500	.136	.808	.056	.000	4.6565+03	6.4692+02	13000	.234	.724	.042	.000	7.4748+02	8.7727+01
6600	.140	.805	.055	.000	4.5660+03	2.3135+03	13100	.238	.720	.042	.000	7.2888+02	2.8966+01
6700	.144	.802	.054	.000	4.4761+03	9.5112+01	13200	.243	.715	.042	.000	7.1091+02	1.3418+01
6800	.148	.799	.054	.000	4.3866+03	2.4607+01	13300	.247	.711	.042	.000	6.9354+02	7.5195+00
6900	.152	.795	.053	.000	4.2976+03	1.0355+01	13400	.252	.706	.042	.000	6.7677+02	4.7448+00
7000	.156	.792	.052	.000	4.2091+03	5.5096+00	13500	.257	.701	.042	.000	6.6057+02	3.2455+00
7100	.160	.789	.052	.000	4.1210+03	3.3711+00	13600	.261	.697	.042	.000	6.4493+02	2.3542+00
7200	.164	.786	.051	.000	4.0338+03	2.2639+00	13700	.266	.692	.042	.000	6.2985+02	1.7857+00
7300	.168	.782	.050	.000	3.9474+03	1.6246+00	13800	.271	.687	.042	.000	6.1529+02	1.4031+00
7400	.172	.779	.049	.000	3.8622+03	1.2248+00	13900	.275	.683	.042	.000	6.0125+02	1.1344+00
7500	.176	.775	.049	.000	3.7781+03	9.5911−01	14000	.280	.678	.042	.000	5.8771+02	9.3911−01
7600	.180	.772	.048	.000	3.6952+03	7.7382−01	14100	.284	.672	.044	.000	5.7556+02	7.9309−01
7700	.185	.768	.047	.000	3.6135+03	6.3944−01	14200	.289	.668	.044	.000	5.6284+02	6.8132−01
7800	.189	.764	.047	.000	3.5332+03	5.3880−01	14300	.293	.663	.043	.000	5.5059+02	5.9408−01
7900	.194	.760	.046	.000	3.4543+03	4.6136−01	14400	.298	.659	.043	.000	5.3879+02	5.2485−01
8000	.198	.756	.046	.000	3.3768+03	4.0039−01	14500	.302	.654	.043	.000	5.2744+02	4.6916−01
8100	.203	.752	.045	.000	3.3008+03	3.5144−01	14600	.306	.651	.043	.000	5.1722+02	6.0137+00
8200	.207	.748	.045	.000	3.2261+03	3.1146−01	14700	.311	.647	.043	.000	5.0635+02	7.2230+00
8300	.212	.744	.044	.000	3.1537+03	8.6625+01	14800	.315	.643	.043	.000	4.9587+02	8.7475+00
8400	.079	.869	.051	.000	2.6226+03	1.8034+02	14900	.319	.639	.043	.000	4.8578+02	1.0645+01
8500	.082	.867	.051	.000	2.5530+03	2.5962+02	15000	.225	.726	.049	.000	4.1618+02	1.2971+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=9000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	2.5054−03	0.0000	1700	.326	.412	.160	.102	2.1708+03	1.5602+01
420	1.000	.000	.000	.000	1.5159−02	0.0000	1720	.332	.413	.158	.096	2.3162+03	1.4142+01
440	1.000	.000	.000	.000	7.7515−02	0.0000	1740	.339	.414	.157	.090	2.4666+03	1.2867+01
460	1.000	.000	.000	.000	3.4250−01	0.0000	1760	.346	.414	.155	.085	2.6219+03	1.1748+01
480	1.000	.000	.000	.000	1.3319+00	0.0000	1780	.352	.415	.153	.079	2.7821+03	1.0762+01
500	1.000	.000	.000	.000	4.6300+00	0.0000	1800	.359	.416	.152	.074	2.9471+03	9.8881+00
520	1.000	.000	.000	.000	1.4576+01	0.0000	1820	.365	.416	.150	.069	3.1169+03	9.1112+00
540	1.000	.000	.000	.000	4.2022+01	0.0000	1840	.372	.417	.148	.064	3.2914+03	8.4176+00
560	1.000	.000	.000	.000	1.1201+02	0.0000	1860	.379	.417	.146	.059	3.4705+03	7.7961+00
580	1.000	.000	.000	.000	2.7831+02	0.0000	1880	.385	.418	.143	.054	3.6545+03	7.2374+00
600	1.000	.000	.000	.000	6.4921+02	0.0000	1900	.391	.418	.141	.050	3.8433+03	6.7334+00
620	1.000	.000	.000	.000	1.4306+03	0.0000	1920	.398	.418	.139	.045	4.0370+03	6.2775+00
640	1.000	.000	.000	.000	2.9941+03	0.0000	1940	.404	.418	.136	.041	4.2357+03	5.8638+00
660	1.000	.000	.000	.000	5.9801+03	0.0000	1960	.410	.418	.134	.037	4.4393+03	5.4876+00
680	1.000	.000	.000	.000	1.1446+04	0.0000	1980	.417	.418	.132	.034	4.6480+03	5.1444+00
700	1.000	.000	.000	.000	2.1072+04	0.0000	2000	.423	.418	.129	.030	4.8619+03	4.8307+00
720	1.000	.000	.000	.000	3.7436+04	0.0000	2020	.428	.417	.127	.027	5.0861+03	4.5433+00
740	1.000	.000	.000	.000	6.4218+04	0.0000	2040	.433	.416	.126	.025	5.3217+03	4.2793+00
760	1.000	.000	.000	.000	1.0668+05	0.0000	2060	.438	.415	.124	.023	5.5599+03	4.0364+00
780	1.000	.000	.000	.000	1.7239+05	0.0000	2080	.443	.413	.122	.021	5.8034+03	3.8125+00
800	1.000	.000	.000	.000	2.7156+05	0.0000	2100	.448	.412	.121	.020	6.0522+03	3.6056+00
820	1.000	.000	.000	.000	4.1779+05	0.0000	2120	.452	.411	.119	.018	6.3062+03	3.4142+00
840	1.000	.000	.000	.000	6.2857+05	0.0000	2140	.457	.409	.117	.017	6.5652+03	3.2368+00
860	1.000	.000	.000	.000	9.2662+05	0.0000	2160	.462	.408	.115	.015	6.8291+03	3.0721+00
880	1.000	.000	.000	.000	1.3404+06	0.0000	2180	.466	.406	.113	.014	7.0977+03	2.9189+00
900	1.000	.000	.000	.000	1.9048+06	0.0000	2200	.471	.404	.112	.013	7.3709+03	2.7762+00
920	.194	.679	.127	.000	4.5054+00	9.8992+02	2220	.475	.403	.110	.012	7.6485+03	2.6432+00
940	.195	.655	.151	.000	6.2320+00	1.0978+04	2240	.479	.401	.108	.011	7.9304+03	2.5189+00
960	.194	.630	.176	.000	8.5235+00	1.6718+04	2260	.483	.399	.106	.011	8.2164+03	2.4027+00
980	.193	.605	.202	.000	1.1528+01	2.9051+04	2280	.488	.398	.105	.010	8.5063+03	2.2939+00
1000	.192	.581	.227	.000	1.5421+01	4.4032+03	2300	.492	.396	.103	.009	8.8000+03	2.1919+00
1020	.191	.558	.252	.000	2.0399+01	1.3346+05	2320	.496	.394	.101	.009	9.0972+03	2.0961+00
1040	.189	.536	.275	.000	2.6679+01	1.3421+04	2340	.500	.392	.100	.008	9.3979+03	2.0062+00
1060	.188	.515	.297	.000	3.4491+01	1.8180+03	2360	.504	.391	.098	.008	9.7017+03	1.9215+00
1080	.187	.497	.316	.000	4.4069+01	8.6605+02	2380	.508	.389	.096	.007	1.0002+04	1.8418+00
1100	.187	.481	.332	.000	5.5639+01	7.3954+02	2400	.512	.387	.095	.006	1.0312+04	1.7666+00
1120	.187	.467	.346	.000	6.9411+01	9.0979+02	2420	.516	.386	.093	.006	1.0624+04	1.6957+00
1140	.188	.455	.357	.000	8.5569+01	1.4463+03	2440	.520	.384	.091	.005	1.0940+04	1.6287+00
1160	.189	.446	.365	.000	1.0426+02	2.9554+03	2460	.523	.382	.090	.005	1.1258+04	1.5654+00
1180	.192	.439	.370	.000	1.2558+02	8.8779+03	2480	.527	.380	.088	.005	1.1579+04	1.5055+00
1200	.195	.433	.372	.000	1.4960+02	7.0276+04	2500	.531	.378	.087	.004	1.1902+04	1.4487+00
1220	.199	.430	.371	.000	1.7633+02	1.6970+06	2520	.534	.376	.085	.004	1.2227+04	1.3949+00
1240	.203	.428	.368	.000	2.0576+02	2.3220+04	2540	.538	.374	.084	.004	1.2553+04	1.3439+00
1260	.209	.428	.363	.000	2.3787+02	5.1279+03	2560	.541	.373	.082	.004	1.2881+04	1.2955+00
1280	.215	.430	.355	.000	2.7258+02	2.0320+03	2580	.545	.371	.081	.004	1.3211+04	1.2494+00
1300	.222	.432	.346	.000	3.0987+02	1.0473+03	2600	.548	.369	.079	.003	1.3542+04	1.2057+00
1320	.230	.436	.334	.000	3.4969+02	6.2581+02	2620	.552	.367	.078	.003	1.3875+04	1.1640+00
1340	.238	.441	.322	.000	3.9202+02	4.1075+02	2640	.555	.365	.077	.003	1.4209+04	1.1244+00
1360	.246	.446	.308	.000	4.3690+02	2.8753+02	2660	.558	.363	.075	.003	1.4545+04	1.0866+00
1380	.256	.452	.293	.000	4.8441+02	2.1092+02	2680	.562	.361	.074	.003	1.4881+04	1.0505+00
1400	.265	.458	.277	.000	5.3465+02	1.6032+02	2700	.565	.360	.073	.003	1.5219+04	1.0162+00
1420	.275	.464	.261	.000	5.8778+02	1.2531+02	2720	.568	.358	.072	.003	1.5558+04	9.8335−01
1440	.285	.470	.245	.000	6.4399+02	1.0019+02	2740	.571	.356	.070	.003	1.5897+04	9.5200−01
1460	.295	.476	.229	.000	7.0351+02	8.1622+01	2760	.573	.353	.071	.003	1.6261+04	9.2203−01
1480	.305	.482	.213	.000	7.6659+02	6.7551+01	2780	.576	.352	.070	.002	1.6602+04	8.9337−01
1500	.315	.487	.198	.000	8.3349+02	5.6666+01	2800	.579	.350	.069	.002	1.6943+04	8.6595−01
1520	.320	.484	.197	.000	9.1896+02	4.8094+01	2820	.582	.348	.067	.002	1.7284+04	8.3969−01
1540	.324	.481	.195	.000	1.0101+03	4.1239+01	2840	.586	.346	.066	.001	1.7612+04	8.1454−01
1560	.282	.409	.166	.144	1.2933+03	3.5683+01	2860	.589	.344	.065	.001	1.7953+04	7.9042−01
1580	.288	.409	.165	.138	1.4033+03	3.1124+01	2880	.592	.343	.064	.001	1.8294+04	7.6730−01
1600	.294	.409	.165	.132	1.5185+03	2.7345+01	2900	.595	.341	.063	.001	1.8635+04	7.4512−01
1620	.300	.410	.164	.126	1.6388+03	2.4180+01	2920	.597	.339	.062	.001	1.8975+04	7.2382−01
1640	.306	.411	.163	.120	1.7642+03	2.1508+01	2940	.600	.337	.061	.001	1.9315+04	7.0337−01
1660	.313	.411	.162	.114	1.8947+03	1.9234+01	2960	.603	.335	.061	.001	1.9654+04	6.8372−01
1680	.319	.412	.161	.108	2.0302+03	1.7285+01	2980	.606	.333	.060	.001	1.9993+04	6.6484−01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=9000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.609	.332	.059	.001	2.0330+04	6.4667−01	8600	.141	.809	.050	.000	4.2535+03	7.3683+02
3020	.612	.330	.058	.000	2.0647+04	6.2919−01	8700	.144	.806	.050	.000	4.1444+03	1.0036+03
3040	.615	.328	.057	.000	2.0983+04	6.1237−01	8800	.148	.803	.049	.000	4.0381+03	1.1249+03
3060	.617	.327	.056	.000	2.1317+04	5.9618−01	8900	.151	.800	.049	.000	3.9343+03	1.1647+03
3080	.620	.325	.055	.000	2.1651+04	5.8057−01	9000	.155	.797	.048	.000	3.8331+03	1.1747+03
3100	.623	.323	.054	.000	2.1984+04	5.6554−01	9100	.158	.793	.048	.000	3.7343+03	1.0236+03
3120	.625	.321	.053	.000	2.2315+04	5.5104−01	9200	.162	.790	.048	.000	3.6380+03	1.5578+03
3140	.628	.319	.053	.000	2.2645+04	5.3706−01	9300	.166	.787	.047	.000	3.5442+03	1.0211+03
3160	.630	.318	.052	.000	2.2973+04	5.2357−01	9400	.170	.783	.047	.000	3.4528+03	5.9324+02
3180	.633	.316	.051	.000	2.3298+04	5.1055−01	9500	.173	.780	.047	.000	3.3638+03	1.9302+03
3200	.636	.314	.050	.000	2.3622+04	4.9798−01	9600	.177	.776	.046	.000	3.2772+03	1.6916+03
3220	.638	.313	.050	.000	2.3945+04	4.8584−01	9700	.181	.773	.046	.000	3.1928+03	3.6441+02
3240	.640	.311	.049	.000	2.4266+04	4.7412−01	9800	.185	.769	.046	.000	3.1107+03	2.0256+02
3260	.643	.309	.048	.000	2.4585+04	4.6278−01	9900	.189	.765	.045	.000	3.0308+03	4.1819+02
3280	.645	.307	.047	.000	2.4903+04	4.5182−01	10000	.194	.762	.045	.000	2.9530+03	2.9139+03
3300	.648	.306	.047	.000	2.5218+04	4.4122−01	10100	.198	.758	.044	.000	2.8773+03	2.8374+03
3320	.650	.304	.046	.000	2.5532+04	4.3097−01	10200	.202	.754	.044	.000	2.8035+03	3.7968+02
3340	.652	.302	.045	.000	2.5844+04	4.2105−01	10300	.206	.750	.043	.000	2.7319+03	1.1739+02
3360	.655	.301	.045	.000	2.6154+04	4.1144−01	10400	.211	.746	.043	.000	2.6622+03	6.5443+01
3380	.657	.299	.044	.000	2.6461+04	4.0214−01	10500	.215	.742	.043	.000	2.5944+03	5.6285+01
3400	.659	.297	.043	.000	2.6767+04	3.9313−01	10600	.220	.738	.042	.000	2.5285+03	7.1939+01
3420	.662	.296	.043	.000	2.7070+04	3.8440−01	10700	.224	.734	.041	.000	2.4645+03	1.4280+02
3440	.664	.294	.042	.000	2.7371+04	3.7594−01	10800	.229	.730	.041	.000	2.4023+03	5.4751+02
3460	.666	.293	.041	.000	2.7670+04	3.6774−01	10900	.234	.726	.040	.000	2.3418+03	6.4493+03
3480	.668	.291	.041	.000	2.7967+04	3.5979−01	11000	.238	.722	.040	.000	2.2830+03	3.4363+03
3500	.670	.289	.040	.000	2.8262+04	3.5208−01	11100	.243	.716	.041	.000	2.2302+03	3.6006+02
3520	.672	.287	.041	.000	2.8595+04	3.4459−01	11200	.247	.712	.041	.000	2.1752+03	1.0653+02
3540	.674	.286	.041	.000	2.8887+04	3.3733−01	11300	.252	.707	.041	.000	2.1219+03	4.9770+01
3560	.676	.284	.040	.000	2.9176+04	3.3028−01	11400	.258	.702	.040	.000	2.0736+03	2.9355+01
3580	.678	.283	.040	.000	2.9463+04	3.2344−01	11500	.263	.697	.040	.000	2.0233+03	1.9955+01
5100	.143	.784	.072	.000	1.0453+04	6.1941+01	11600	.268	.692	.040	.000	1.9746+03	1.5196+01
5200	.148	.781	.071	.000	1.0329+04	2.9765+01	11700	.273	.688	.039	.000	1.9273+03	1.2779+01
5300	.153	.778	.069	.000	1.0198+04	1.8404+01	11800	.278	.683	.039	.000	1.8814+03	1.1757+01
5400	.158	.775	.067	.000	1.0060+04	1.3228+01	11900	.283	.678	.039	.000	1.8370+03	1.1792+01
5500	.162	.772	.065	.000	9.9170+03	1.0592+01	12000	.288	.673	.039	.000	1.7938+03	1.2889+01
5600	.167	.769	.064	.000	9.7696+03	9.2923+00	12100	.293	.668	.038	.000	1.7519+03	1.5381+01
5700	.172	.766	.062	.000	9.6188+03	8.9028+00	12200	.298	.663	.038	.000	1.7113+03	2.0142+01
5800	.177	.762	.061	.000	9.4661+03	9.3503+00	12300	.304	.659	.038	.000	1.6720+03	2.9270+01
5900	.182	.759	.060	.000	9.3108+03	1.0849+01	12400	.309	.654	.038	.000	1.6339+03	4.8291+01
6000	.187	.755	.058	.000	9.1539+03	1.4059+01	12500	.314	.649	.037	.000	1.5969+03	9.3792+01
6100	.192	.751	.057	.000	8.9974+03	2.0685+01	12600	.319	.644	.037	.000	1.5611+03	2.4182+02
6200	.197	.747	.056	.000	8.8401+03	3.5635+01	12700	.324	.639	.037	.000	1.5264+03	1.1838+03
6300	.202	.743	.055	.000	8.6826+03	7.6888+01	12800	.330	.634	.037	.000	1.4929+03	3.2247+04
6400	.207	.739	.054	.000	8.5250+03	2.4859+02	12900	.335	.629	.037	.000	1.4603+03	3.0241+03
6500	.212	.735	.053	.000	8.3678+03	2.5685+03	13000	.340	.624	.036	.000	1.4288+03	3.8462+02
6600	.217	.730	.053	.000	8.2104+03	9.1768+03	13100	.345	.619	.036	.000	1.3983+03	1.2565+02
6700	.223	.726	.052	.000	8.0546+03	3.7830+02	13200	.350	.614	.036	.000	1.3687+03	5.8842+01
6800	.228	.721	.051	.000	7.8999+03	9.7940+01	13300	.356	.609	.036	.000	1.3401+03	3.2870+01
6900	.233	.717	.050	.000	7.7466+03	4.1188+01	13400	.361	.604	.036	.000	1.3124+03	2.0640+01
7000	.238	.712	.049	.000	7.5947+03	2.1877+01	13500	.366	.599	.035	.000	1.2856+03	1.4073+01
7100	.244	.708	.049	.000	7.4437+03	1.3352+01	13600	.371	.594	.035	.000	1.2597+03	1.0185+01
7200	.249	.703	.048	.000	7.2946+03	8.9401+00	13700	.376	.589	.035	.000	1.2346+03	7.7130+00
7300	.255	.698	.047	.000	7.1472+03	6.3942+00	13800	.381	.584	.035	.000	1.2104+03	6.0528+00
7400	.260	.693	.046	.000	7.0021+03	4.8039+00	13900	.386	.579	.035	.000	1.1870+03	4.8888+00
7500	.266	.689	.046	.000	6.8593+03	3.7486+00	14000	.391	.574	.035	.000	1.1644+03	4.0437+00
7600	.272	.684	.045	.000	6.7187+03	3.0138+00	14100	.395	.569	.036	.000	1.1440+03	3.4124+00
7700	.277	.679	.044	.000	6.5804+03	2.4820+00	14200	.400	.564	.036	.000	1.1227+03	2.9295+00
7800	.283	.674	.043	.000	6.4446+03	2.0845+00	14300	.405	.560	.036	.000	1.1021+03	2.5527+00
7900	.289	.669	.043	.000	6.3112+03	1.7794+00	14400	.410	.555	.035	.000	1.0822+03	2.2537+00
8000	.294	.664	.042	.000	6.1807+03	1.5396+00	14500	.414	.551	.035	.000	1.0629+03	2.0133+00
8100	.300	.658	.042	.000	6.0525+03	1.3476+00	14600	.418	.547	.035	.000	1.0454+03	2.1495+01
8200	.306	.653	.041	.000	5.9267+03	1.1912+00	14700	.423	.543	.035	.000	1.0267+03	2.4635+01
8300	.312	.648	.040	.000	5.8055+03	2.6392+02	14800	.427	.539	.034	.000	1.0086+03	2.8374+01
8400	.134	.815	.051	.000	4.4798+03	5.1756+02	14900	.431	.535	.034	.000	9.9115+02	3.2768+01
8500	.138	.812	.050	.000	4.3652+03	6.2544+02	15000	.435	.531	.034	.000	9.7431+02	3.7880+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=9500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.9234−02	0.0000	1700	.422	.376	.140	.063	5.1824+03	4.7494+01
420	1.000	.000	.000	.000	1.0528−01	0.0000	1720	.428	.375	.138	.059	5.5233+03	4.3067+01
440	1.000	.000	.000	.000	4.9150−01	0.0000	1740	.435	.374	.136	.056	5.8756+03	3.9201+01
460	1.000	.000	.000	.000	1.9984+00	0.0000	1760	.441	.372	.134	.052	6.2392+03	3.5806+01
480	1.000	.000	.000	.000	7.2013+00	0.0000	1780	.448	.371	.132	.049	6.6140+03	3.2812+01
500	1.000	.000	.000	.000	2.3338+01	0.0000	1800	.454	.370	.130	.045	7.0000+03	3.0159+01
520	1.000	.000	.000	.000	6.8866+01	0.0000	1820	.461	.369	.128	.042	7.3971+03	2.7799+01
540	1.000	.000	.000	.000	1.8699+02	0.0000	1840	.467	.368	.126	.039	7.8044+03	2.5691+01
560	1.000	.000	.000	.000	4.7145+02	0.0000	1860	.473	.367	.124	.036	8.2225+03	2.3801+01
580	1.000	.000	.000	.000	1.1123+03	0.0000	1880	.479	.366	.121	.033	8.6513+03	2.2102+01
600	1.000	.000	.000	.000	2.4721+03	0.0000	1900	.486	.365	.119	.030	9.0908+03	2.0569+01
620	1.000	.000	.000	.000	5.2066+03	0.0000	1920	.492	.364	.117	.028	9.5411+03	1.9181+01
640	1.000	.000	.000	.000	1.0444+04	0.0000	1940	.498	.363	.115	.025	1.0002+04	1.7922+01
660	1.000	.000	.000	.000	2.0046+04	0.0000	1960	.503	.361	.112	.023	1.0474+04	1.6776+01
680	1.000	.000	.000	.000	3.6955+04	0.0000	1980	.509	.360	.110	.021	1.0956+04	1.5731+01
700	1.000	.000	.000	.000	6.5671+04	0.0000	2000	.515	.359	.108	.019	1.1450+04	1.4775+01
720	1.000	.000	.000	.000	1.1284+05	0.0000	2020	.520	.357	.106	.017	1.1963+04	1.3899+01
740	1.000	.000	.000	.000	1.8755+05	0.0000	2040	.525	.355	.105	.016	1.2496+04	1.3095+01
760	1.000	.000	.000	.000	3.0238+05	0.0000	2060	.530	.353	.103	.014	1.3036+04	1.2354+01
780	1.000	.000	.000	.000	4.7495+05	0.0000	2080	.534	.351	.101	.013	1.3586+04	1.1671+01
800	1.000	.000	.000	.000	7.2826+05	0.0000	2100	.539	.349	.100	.012	1.4146+04	1.1040+01
820	1.000	.000	.000	.000	1.0920+06	0.0000	2120	.543	.347	.098	.011	1.4717+04	1.0456+01
840	1.000	.000	.000	.000	1.6033+06	0.0000	2140	.548	.345	.097	.010	1.5297+04	9.9145+00
860	1.000	.000	.000	.000	2.3092+06	0.0000	2160	.552	.343	.095	.009	1.5887+04	9.4116+00
880	1.000	.000	.000	.000	3.2669+06	0.0000	2180	.556	.341	.093	.009	1.6486+04	8.9439+00
900	1.000	.000	.000	.000	4.5449+06	0.0000	2200	.560	.339	.092	.008	1.7094+04	8.5082+00
920	.257	.629	.114	.000	1.6030+01	3.5448+03	2220	.565	.337	.090	.008	1.7710+04	8.1018+00
940	.258	.608	.135	.000	2.1708+01	4.0572+04	2240	.569	.336	.089	.007	1.8334+04	7.7221+00
960	.258	.586	.156	.000	2.9075+01	6.0914+04	2260	.573	.334	.087	.007	1.8966+04	7.3670+00
980	.257	.565	.178	.000	3.8521+01	1.0496+05	2280	.577	.332	.086	.006	1.9605+04	7.0344+00
1000	.256	.544	.200	.000	5.0493+01	1.5176+04	2300	.581	.330	.084	.006	2.0251+04	6.7226+00
1020	.255	.524	.221	.000	6.5484+01	4.5754+05	2320	.584	.328	.083	.005	2.0904+04	6.4298+00
1040	.254	.505	.241	.000	8.4021+01	4.5859+04	2340	.588	.326	.081	.005	2.1563+04	6.1546+00
1060	.253	.487	.259	.000	1.0665+02	6.1065+03	2360	.592	.324	.080	.005	2.2228+04	5.8957+00
1080	.253	.471	.276	.000	1.3390+02	2.8229+03	2380	.596	.322	.078	.004	2.2892+04	5.6519+00
1100	.253	.457	.290	.000	1.6629+02	2.3271+03	2400	.599	.320	.077	.004	2.3567+04	5.4219+00
1120	.254	.445	.301	.000	2.0427+02	2.7908+03	2420	.603	.318	.076	.004	2.4248+04	5.2049+00
1140	.255	.434	.311	.000	2.4825+02	4.3792+03	2440	.607	.316	.074	.003	2.4934+04	4.9999+00
1160	.257	.425	.317	.000	2.9851+02	8.9069+03	2460	.610	.314	.073	.003	2.5625+04	4.8061+00
1180	.260	.418	.321	.000	3.5528+02	2.6730+04	2480	.614	.312	.072	.003	2.6320+04	4.6227+00
1200	.264	.413	.323	.000	4.1866+02	2.1126+05	2500	.617	.310	.070	.003	2.7018+04	4.4489+00
1220	.269	.409	.322	.000	4.8870+02	5.0824+06	2520	.620	.308	.069	.003	2.7721+04	4.2842+00
1240	.275	.406	.319	.000	5.6537+02	6.9872+04	2540	.624	.306	.068	.002	2.8424+04	4.1279+00
1260	.281	.405	.314	.000	6.4860+02	1.5427+04	2560	.627	.304	.067	.002	2.9129+04	3.9795+00
1280	.289	.405	.306	.000	7.3831+02	6.1056+03	2580	.630	.302	.065	.002	2.9837+04	3.8385+00
1300	.297	.406	.298	.000	8.3442+02	3.1438+03	2600	.633	.301	.064	.002	3.0547+04	3.7044+00
1320	.305	.407	.287	.000	9.3686+02	1.8780+03	2620	.636	.299	.063	.002	3.1259+04	3.5768+00
1340	.315	.410	.276	.000	1.0456+03	1.2329+03	2640	.639	.297	.062	.002	3.1974+04	3.4552+00
1360	.324	.412	.263	.000	1.1609+03	8.6352+02	2660	.642	.295	.061	.002	3.2690+04	3.3394+00
1380	.334	.416	.250	.000	1.2827+03	6.3397+02	2680	.645	.293	.060	.002	3.3407+04	3.2290+00
1400	.345	.419	.236	.000	1.4116+03	4.8236+02	2700	.648	.291	.059	.002	3.4125+04	3.1236+00
1420	.356	.422	.222	.000	1.5476+03	3.7744+02	2720	.651	.289	.058	.002	3.4845+04	3.0230+00
1440	.366	.425	.208	.000	1.6914+03	3.0211+02	2740	.654	.288	.057	.002	3.5565+04	2.9269+00
1460	.377	.428	.194	.000	1.8434+03	2.4637+02	2760	.656	.285	.057	.002	3.6326+04	2.8350+00
1480	.388	.431	.181	.000	2.0040+03	2.0411+02	2780	.659	.284	.056	.001	3.7047+04	2.7471+00
1500	.399	.433	.168	.000	2.1739+03	1.7138+02	2800	.662	.282	.055	.001	3.7768+04	2.6629+00
1520	.404	.430	.167	.000	2.3839+03	1.4558+02	2820	.664	.280	.054	.001	3.8488+04	2.5824+00
1540	.409	.426	.165	.000	2.6065+03	1.2494+02	2840	.667	.278	.053	.001	3.9192+04	2.5052+00
1560	.377	.384	.149	.090	3.1233+03	1.0818+02	2860	.670	.277	.053	.001	3.9910+04	2.4313+00
1580	.383	.383	.148	.086	3.3820+03	9.4430+01	2880	.672	.275	.052	.001	4.0627+04	2.3603+00
1600	.389	.382	.147	.082	3.6526+03	8.3017+01	2900	.675	.273	.051	.001	4.1343+04	2.2922+00
1620	.396	.380	.145	.078	3.9350+03	7.3455+01	2920	.678	.271	.050	.001	4.2057+04	2.2269+00
1640	.402	.379	.144	.075	4.2293+03	6.5375+01	2940	.680	.270	.049	.001	4.2769+04	2.1641+00
1660	.409	.378	.143	.071	4.5354+03	5.8493+01	2960	.683	.268	.049	.001	4.3479+04	2.1038+00
1680	.415	.377	.141	.067	4.8531+03	5.2590+01	2980	.685	.266	.048	.001	4.4187+04	2.0458+00

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=9500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.688	.265	.047	.001	4.4893+04	1.9900+00	8600	.217	.735	.047	.000	7.0759+03	1.5427+03
3020	.691	.263	.046	.000	4.5566+04	1.9364+00	8700	.222	.731	.047	.000	6.9061+03	2.1272+03
3040	.693	.261	.046	.000	4.6266+04	1.8847+00	8800	.227	.727	.046	.000	6.7405+03	2.4294+03
3060	.695	.260	.045	.000	4.6963+04	1.8350+00	8900	.231	.723	.046	.000	6.5792+03	2.6767+03
3080	.698	.258	.044	.000	4.7657+04	1.7871+00	9000	.236	.718	.045	.000	6.4219+03	2.6091+03
3100	.700	.257	.043	.000	4.8348+04	1.7409+00	9100	.241	.714	.045	.000	6.2684+03	2.6653+03
3120	.702	.255	.043	.000	4.9036+04	1.6964+00	9200	.246	.710	.045	.000	6.1189+03	3.3299+03
3140	.705	.253	.042	.000	4.9720+04	1.6534+00	9300	.251	.705	.044	.000	5.9733+03	2.4972+03
3160	.707	.252	.041	.000	5.0398+04	1.6120+00	9400	.256	.701	.044	.000	5.8315+03	1.9715+03
3180	.709	.250	.041	.000	5.1071+04	1.5720+00	9500	.261	.696	.043	.000	5.6934+03	4.0057+03
3200	.711	.249	.040	.000	5.1741+04	1.5334+00	9600	.266	.692	.043	.000	5.5590+03	3.6531+03
3220	.713	.247	.040	.000	5.2406+04	1.4961+00	9700	.271	.687	.042	.000	5.4281+03	1.2578+03
3240	.716	.245	.039	.000	5.3068+04	1.4600+00	9800	.276	.682	.042	.000	5.3008+03	7.6939+02
3260	.718	.244	.038	.000	5.3725+04	1.4252+00	9900	.281	.678	.041	.000	5.1769+03	1.5029+03
3280	.720	.242	.038	.000	5.4377+04	1.3915+00	10000	.286	.673	.041	.000	5.0562+03	6.4345+03
3300	.722	.241	.037	.000	5.5026+04	1.3590+00	10100	.291	.668	.040	.000	4.9387+03	6.2971+03
3320	.724	.239	.037	.000	5.5670+04	1.3274+00	10200	.297	.663	.040	.000	4.8243+03	1.3590+03
3340	.726	.238	.036	.000	5.6309+04	1.2969+00	10300	.302	.659	.039	.000	4.7131+03	4.4660+02
3360	.728	.236	.036	.000	5.6944+04	1.2674+00	10400	.307	.654	.039	.000	4.6050+03	2.4796+02
3380	.730	.235	.035	.000	5.7573+04	1.2388+00	10500	.313	.649	.038	.000	4.4997+03	2.1004+02
3400	.732	.233	.035	.000	5.8197+04	1.2111+00	10600	.318	.644	.038	.000	4.3974+03	2.6844+02
3420	.734	.232	.034	.000	5.8817+04	1.1843+00	10700	.324	.639	.037	.000	4.2979+03	5.4200+02
3440	.736	.231	.034	.000	5.9431+04	1.1583+00	10800	.329	.634	.036	.000	4.2012+03	2.0141+03
3460	.738	.229	.033	.000	6.0040+04	1.1331+00	10900	.335	.629	.036	.000	4.1071+03	1.2626+04
3480	.740	.228	.033	.000	6.0645+04	1.1086+00	11000	.340	.624	.035	.000	4.0156+03	9.1158+03
3500	.742	.226	.032	.000	6.1244+04	1.0849+00	11100	.345	.618	.036	.000	3.9334+03	1.3526+03
3520	.743	.225	.033	.000	6.1904+04	1.0619+00	11200	.351	.613	.036	.000	3.8477+03	4.0221+02
3540	.744	.223	.032	.000	6.2495+04	1.0395+00	11300	.356	.608	.036	.000	3.7645+03	1.8534+02
3560	.746	.222	.032	.000	6.3082+04	1.0178+00	11400	.364	.601	.035	.000	3.6936+03	1.0879+02
3580	.748	.221	.031	.000	6.3663+04	9.9679−01	11500	.369	.596	.035	.000	3.6150+03	7.4507+01
5100	.214	.717	.069	.000	1.8082+04	2.1912+02	11600	.375	.591	.034	.000	3.5387+03	5.6982+01
5200	.221	.713	.067	.000	1.7866+04	1.0431+02	11700	.380	.586	.034	.000	3.4646+03	4.7790+01
5300	.227	.708	.065	.000	1.7639+04	6.3942+01	11800	.386	.580	.034	.000	3.3926+03	4.3791+01
5400	.233	.704	.063	.000	1.7403+04	4.5625+01	11900	.392	.575	.033	.000	3.3228+03	4.3803+01
5500	.240	.699	.062	.000	1.7159+04	3.6321+01	12000	.397	.570	.033	.000	3.2549+03	4.7821+01
5600	.246	.694	.060	.000	1.6910+04	3.1731+01	12100	.403	.565	.033	.000	3.1890+03	5.7094+01
5700	.252	.689	.058	.000	1.6657+04	3.0320+01	12200	.408	.559	.032	.000	3.1250+03	7.4927+01
5800	.259	.684	.057	.000	1.6402+04	3.1807+01	12300	.414	.554	.032	.000	3.0628+03	1.0884+02
5900	.265	.679	.056	.000	1.6144+04	3.6908+01	12400	.419	.549	.032	.000	3.0025+03	1.7784+02
6000	.272	.674	.054	.000	1.5884+04	4.7870+01	12500	.425	.544	.031	.000	2.9440+03	3.4563+02
6100	.278	.669	.053	.000	1.5626+04	7.0514+01	12600	.430	.539	.031	.000	2.8871+03	9.0030+02
6200	.284	.664	.052	.000	1.5368+04	1.2158+02	12700	.435	.534	.031	.000	2.8320+03	4.3485+03
6300	.291	.658	.051	.000	1.5109+04	2.6238+02	12800	.441	.529	.031	.000	2.7785+03	5.8395+04
6400	.297	.653	.050	.000	1.4851+04	8.4764+02	12900	.446	.524	.030	.000	2.7266+03	1.0375+04
6500	.303	.647	.049	.000	1.4595+04	8.7387+03	13000	.451	.519	.030	.000	2.6762+03	1.4358+03
6600	.310	.642	.048	.000	1.4338+04	3.1190+04	13100	.457	.514	.030	.000	2.6273+03	4.6462+02
6700	.316	.636	.047	.000	1.4085+04	1.2894+03	13200	.462	.509	.030	.000	2.5798+03	2.1617+02
6800	.323	.631	.046	.000	1.3834+04	3.3421+02	13300	.467	.504	.029	.000	2.5337+03	1.2183+02
6900	.329	.625	.046	.000	1.3586+04	1.4058+02	13400	.472	.499	.029	.000	2.4891+03	7.6785+01
7000	.336	.619	.045	.000	1.3340+04	7.4630+01	13500	.477	.494	.029	.000	2.4458+03	5.2177+01
7100	.342	.614	.044	.000	1.3096+04	4.5506+01	13600	.482	.489	.029	.000	2.4038+03	3.7648+01
7200	.349	.608	.043	.000	1.2855+04	3.0428+01	13700	.487	.485	.028	.000	2.3631+03	2.8447+01
7300	.355	.602	.042	.000	1.2617+04	2.1730+01	13800	.492	.480	.028	.000	2.3237+03	2.2287+01
7400	.362	.597	.042	.000	1.2383+04	1.6299+01	13900	.497	.475	.028	.000	2.2854+03	1.7978+01
7500	.368	.591	.041	.000	1.2153+04	1.2697+01	14000	.501	.471	.028	.000	2.2484+03	1.4855+01
7600	.375	.585	.040	.000	1.1926+04	1.0191+01	14100	.505	.466	.029	.000	2.2147+03	1.2526+01
7700	.381	.579	.039	.000	1.1704+04	8.3793+00	14200	.510	.462	.028	.000	2.1796+03	1.0746+01
7800	.388	.574	.039	.000	1.1485+04	7.0264+00	14300	.514	.458	.028	.000	2.1455+03	9.3576+00
7900	.394	.568	.038	.000	1.1270+04	5.9887+00	14400	.519	.453	.028	.000	2.1125+03	8.2569+00
8000	.401	.562	.037	.000	1.1060+04	5.1745+00	14500	.523	.449	.028	.000	2.0806+03	7.3718+00
8100	.407	.556	.037	.000	1.0854+04	4.5231+00	14600	.527	.446	.027	.000	2.0509+03	6.2290+01
8200	.414	.550	.036	.000	1.0651+04	3.9930+00	14700	.530	.442	.027	.000	2.0192+03	6.8918+01
8300	.421	.544	.035	.000	1.0457+04	6.8128+02	14800	.534	.439	.027	.000	1.9885+03	7.6587+01
8400	.208	.743	.048	.000	7.4287+03	1.3720+03	14900	.538	.436	.027	.000	1.9587+03	8.5343+01
8500	.213	.739	.048	.000	7.2501+03	1.3920+03	15000	.541	.432	.027	.000	1.9298+03	9.5261+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T = 10000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.1931−01	0.0000	1700	.512	.330	.119	.039	1.1683+04	1.2806+02
420	1.000	.000	.000	.000	5.9676−01	0.0000	1720	.518	.328	.117	.037	1.2429+04	1.1617+02
440	1.000	.000	.000	.000	2.5668+00	0.0000	1740	.524	.326	.115	.034	1.3199+04	1.0579+02
460	1.000	.000	.000	.000	9.6839+00	0.0000	1760	.530	.324	.113	.032	1.3993+04	9.6668+01
480	1.000	.000	.000	.000	3.2583+01	0.0000	1780	.536	.322	.111	.030	1.4811+04	8.8618+01
500	1.000	.000	.000	.000	9.9136+01	0.0000	1800	.542	.321	.109	.028	1.5652+04	8.1482+01
520	1.000	.000	.000	.000	2.7598+02	0.0000	1820	.548	.319	.107	.026	1.6516+04	7.5131+01
540	1.000	.000	.000	.000	7.1002+02	0.0000	1840	.554	.317	.105	.024	1.7401+04	6.9457+01
560	1.000	.000	.000	.000	1.7027+03	0.0000	1860	.560	.315	.103	.022	1.8307+04	6.4369+01
580	1.000	.000	.000	.000	3.8340+03	0.0000	1880	.566	.313	.101	.020	1.9236+04	5.9791+01
600	1.000	.000	.000	.000	8.1585+03	0.0000	1900	.571	.311	.099	.018	2.0186+04	5.5660+01
620	1.000	.000	.000	.000	1.6497+04	0.0000	1920	.577	.309	.097	.017	2.1158+04	5.1919+01
640	1.000	.000	.000	.000	3.1855+04	0.0000	1940	.582	.308	.095	.015	2.2151+04	4.8524+01
660	1.000	.000	.000	.000	5.8984+04	0.0000	1960	.588	.306	.093	.014	2.3165+04	4.5433+01
680	1.000	.000	.000	.000	1.0513+05	0.0000	1980	.593	.304	.091	.013	2.4199+04	4.2613+01
700	1.000	.000	.000	.000	1.8097+05	0.0000	2000	.598	.302	.089	.011	2.5255+04	4.0033+01
720	1.000	.000	.000	.000	3.0175+05	0.0000	2020	.602	.300	.087	.010	2.6347+04	3.7668+01
740	1.000	.000	.000	.000	4.8748+05	0.0000	2040	.607	.298	.086	.010	2.7471+04	3.5495+01
760	1.000	.000	.000	.000	7.6507+05	0.0000	2060	.611	.296	.085	.009	2.8609+04	3.3495+01
780	1.000	.000	.000	.000	1.1714+06	0.0000	2080	.615	.293	.083	.008	2.9767+04	3.1650+01
800	1.000	.000	.000	.000	1.7531+06	0.0000	2100	.620	.291	.082	.007	3.0944+04	2.9945+01
820	1.000	.000	.000	.000	2.5688+06	0.0000	2120	.624	.289	.080	.007	3.2139+04	2.8366+01
840	1.000	.000	.000	.000	3.6894+06	0.0000	2140	.628	.287	.079	.006	3.3352+04	2.6902+01
860	1.000	.000	.000	.000	5.2034+06	0.0000	2160	.632	.285	.078	.006	3.4581+04	2.5542+01
880	1.000	.000	.000	.000	7.2157+06	0.0000	2180	.635	.283	.076	.005	3.5827+04	2.4277+01
900	1.000	.000	.000	.000	9.8483+06	0.0000	2200	.639	.281	.075	.005	3.7088+04	2.3098+01
920	.325	.573	.102	.000	5.0656+01	1.1076+04	2220	.643	.279	.074	.005	3.8364+04	2.1998+01
940	.326	.555	.119	.000	6.7337+01	1.3150+05	2240	.647	.277	.072	.004	3.9653+04	2.0971+01
960	.327	.536	.138	.000	8.8547+01	1.9431+05	2260	.650	.275	.071	.004	4.0957+04	2.0009+01
980	.327	.517	.156	.000	1.1521+02	3.3216+05	2280	.654	.273	.070	.004	4.2272+04	1.9109+01
1000	.326	.499	.174	.000	1.4837+02	4.5743+04	2300	.657	.271	.068	.004	4.3600+04	1.8265+01
1020	.326	.482	.192	.000	1.8913+02	1.3727+06	2320	.661	.269	.067	.003	4.4939+04	1.7472+01
1040	.325	.466	.209	.000	2.3866+02	1.3710+05	2340	.664	.267	.066	.003	4.6288+04	1.6726+01
1060	.325	.451	.224	.000	2.9813+02	1.7992+04	2360	.668	.265	.065	.003	4.7647+04	1.6025+01
1080	.325	.437	.238	.000	3.6867+02	8.1094+03	2380	.671	.263	.064	.003	4.9007+04	1.5364+01
1100	.325	.425	.250	.000	4.5133+02	6.4790+03	2400	.674	.261	.062	.002	5.0384+04	1.4741+01
1120	.327	.414	.260	.000	5.4705+02	7.5844+03	2420	.677	.259	.061	.002	5.1768+04	1.4153+01
1140	.329	.404	.267	.000	6.5661+02	1.1749+04	2440	.681	.257	.060	.002	5.3160+04	1.3597+01
1160	.332	.396	.273	.000	7.8058+02	2.3778+04	2460	.684	.255	.059	.002	5.4560+04	1.3071+01
1180	.335	.389	.276	.000	9.1939+02	7.1267+04	2480	.687	.254	.058	.002	5.5965+04	1.2574+01
1200	.340	.384	.277	.000	1.0733+03	5.6226+05	2500	.690	.252	.057	.002	5.7376+04	1.2103+01
1220	.345	.379	.275	.000	1.2423+03	1.3480+07	2520	.693	.250	.056	.002	5.8792+04	1.1656+01
1240	.352	.376	.272	.000	1.4264+03	1.8615+05	2540	.696	.248	.055	.002	6.0206+04	1.1232+01
1260	.359	.374	.267	.000	1.6256+03	4.1102+04	2560	.699	.246	.054	.001	6.1622+04	1.0829+01
1280	.367	.372	.261	.000	1.8396+03	1.6251+04	2580	.701	.244	.053	.001	6.3041+04	1.0446+01
1300	.376	.372	.253	.000	2.0685+03	8.3612+03	2600	.704	.243	.052	.001	6.4463+04	1.0082+01
1320	.385	.371	.244	.000	2.3122+03	4.9929+03	2620	.707	.241	.051	.001	6.5886+04	9.7360+00
1340	.395	.372	.233	.000	2.5705+03	3.2783+03	2640	.710	.239	.050	.001	6.7311+04	9.4061+00
1360	.405	.373	.222	.000	2.8441+03	2.2974+03	2660	.712	.238	.049	.001	6.8738+04	9.0916+00
1380	.416	.373	.211	.000	3.1332+03	1.6880+03	2680	.715	.236	.048	.001	7.0165+04	8.7917+00
1400	.427	.375	.199	.000	3.4384+03	1.2855+03	2700	.717	.234	.047	.001	7.1592+04	8.5056+00
1420	.437	.376	.187	.000	3.7605+03	1.0069+03	2720	.720	.233	.047	.001	7.3019+04	8.2323+00
1440	.449	.377	.175	.000	4.1004+03	8.0681+02	2740	.722	.231	.046	.001	7.4445+04	7.9712+00
1460	.459	.377	.163	.000	4.4589+03	6.5864+02	2760	.724	.229	.046	.001	7.5934+04	7.7216+00
1480	.470	.378	.152	.000	4.8370+03	5.4619+02	2780	.727	.227	.045	.001	7.7358+04	7.4828+00
1500	.481	.378	.141	.000	5.2358+03	4.5904+02	2800	.729	.226	.044	.001	7.8780+04	7.2542+00
1520	.486	.374	.140	.000	5.7141+03	3.9030+02	2820	.731	.224	.044	.001	8.0198+04	7.0353+00
1540	.491	.371	.138	.000	6.2190+03	3.3522+02	2840	.734	.223	.043	.001	8.1595+04	6.8256+00
1560	.469	.346	.129	.056	7.1513+03	2.9050+02	2860	.736	.221	.042	.001	8.3006+04	6.6246+00
1580	.475	.344	.128	.054	7.7231+03	2.5375+02	2880	.739	.219	.042	.001	8.4412+04	6.4317+00
1600	.481	.341	.126	.051	8.3204+03	2.2323+02	2900	.741	.218	.041	.001	8.5814+04	6.2467+00
1620	.487	.339	.125	.049	8.9429+03	1.9764+02	2920	.743	.216	.040	.000	8.7211+04	6.0690+00
1640	.494	.337	.123	.046	9.5906+03	1.7600+02	2940	.745	.215	.040	.000	8.8602+04	5.8983+00
1660	.500	.335	.122	.044	1.0263+04	1.5756+02	2960	.747	.213	.039	.000	8.9988+04	5.7343+00
1680	.506	.332	.120	.041	1.0961+04	1.4173+02	2980	.749	.212	.038	.000	9.1368+04	5.5766+00

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=10000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.752	.210	.038	.000	9.2741+04	5.4250+00	8600	.309	.648	.043	.000	1.1540+04	3.0390+03
3020	.754	.209	.037	.000	9.4068+04	5.2790+00	8700	.315	.643	.043	.000	1.1286+04	4.0853+03
3040	.756	.207	.036	.000	9.5427+04	5.1385+00	8800	.320	.637	.042	.000	1.1039+04	4.7272+03
3060	.758	.206	.036	.000	9.6779+04	5.0032+00	8900	.326	.632	.042	.000	1.0798+04	5.3932+03
3080	.760	.205	.035	.000	9.8124+04	4.8729+00	9000	.332	.627	.041	.000	1.0563+04	5.3411+03
3100	.762	.203	.035	.000	9.9461+04	4.7472+00	9100	.337	.622	.041	.000	1.0334+04	5.8113+03
3120	.764	.202	.034	.000	1.0079+05	4.6261+00	9200	.343	.617	.040	.000	1.0110+04	6.5731+03
3140	.766	.200	.034	.000	1.0211+05	4.5092+00	9300	.349	.612	.040	.000	9.8926+03	5.4612+03
3160	.768	.199	.033	.000	1.0342+05	4.3965+00	9400	.355	.606	.039	.000	9.6806+03	5.1576+03
3180	.770	.198	.033	.000	1.0471+05	4.2876+00	9500	.360	.601	.038	.000	9.4740+03	7.3839+03
3200	.772	.196	.032	.000	1.0600+05	4.1825+00	9600	.366	.596	.038	.000	9.2728+03	6.8733+03
3220	.774	.195	.032	.000	1.0728+05	4.0810+00	9700	.372	.591	.037	.000	9.0769+03	3.4825+03
3240	.775	.194	.031	.000	1.0854+05	3.9829+00	9800	.378	.585	.037	.000	8.8861+03	2.4495+03
3260	.777	.192	.031	.000	1.0980+05	3.8881+00	9900	.383	.580	.036	.000	8.7003+03	4.3370+03
3280	.779	.191	.030	.000	1.1105+05	3.7964+00	10000	.389	.575	.036	.000	8.5193+03	1.2421+04
3300	.781	.190	.030	.000	1.1229+05	3.7077+00	10100	.395	.570	.035	.000	8.3429+03	1.2151+04
3320	.782	.188	.029	.000	1.1352+05	3.6219+00	10200	.401	.564	.035	.000	8.1710+03	3.8867+03
3340	.784	.187	.029	.000	1.1474+05	3.5388+00	10300	.407	.559	.034	.000	8.0038+03	1.4370+03
3360	.786	.186	.028	.000	1.1595+05	3.4584+00	10400	.413	.554	.034	.000	7.8410+03	8.0859+02
3380	.788	.185	.028	.000	1.1714+05	3.3806+00	10500	.419	.548	.033	.000	7.6825+03	6.8376+02
3400	.789	.183	.028	.000	1.1833+05	3.3051+00	10600	.424	.543	.032	.000	7.5282+03	8.7582+02
3420	.791	.182	.027	.000	1.1950+05	3.2320+00	10700	.430	.538	.032	.000	7.3780+03	1.7614+03
3440	.792	.181	.027	.000	1.2067+05	3.1612+00	10800	.436	.533	.031	.000	7.2318+03	6.0055+03
3460	.794	.180	.026	.000	1.2182+05	3.0925+00	10900	.442	.527	.031	.000	7.0895+03	2.0022+04
3480	.796	.178	.026	.000	1.2296+05	3.0259+00	11000	.448	.522	.030	.000	6.9510+03	1.8515+04
3500	.797	.177	.026	.000	1.2409+05	2.9613+00	11100	.453	.516	.031	.000	6.8261+03	4.1955+03
3520	.798	.176	.026	.000	1.2531+05	2.8986+00	11200	.459	.511	.030	.000	6.6961+03	1.3164+03
3540	.800	.175	.026	.000	1.2643+05	2.8377+00	11300	.464	.506	.030	.000	6.5695+03	6.0433+02
3560	.801	.174	.025	.000	1.2753+05	2.7786+00	11400	.472	.498	.029	.000	6.4716+03	3.5094+02
3580	.803	.172	.025	.000	1.2862+05	2.7213+00	11500	.478	.493	.029	.000	6.3516+03	2.3919+02
5100	.298	.638	.063	.000	3.0302+04	6.7584+02	11600	.483	.488	.029	.000	6.2349+03	1.8320+02
5200	.306	.633	.061	.000	2.9957+04	3.1910+02	11700	.489	.483	.028	.000	6.1214+03	1.5439+02
5300	.314	.627	.060	.000	2.9598+04	1.9413+02	11800	.494	.478	.028	.000	6.0109+03	1.4184+02
5400	.321	.621	.058	.000	2.9226+04	1.3762+02	11900	.500	.473	.028	.000	5.9035+03	1.4183+02
5500	.329	.615	.056	.000	2.8843+04	1.0899+02	12000	.505	.468	.027	.000	5.7990+03	1.5472+02
5600	.337	.609	.055	.000	2.8453+04	9.4841+01	12100	.511	.463	.027	.000	5.6972+03	1.8443+02
5700	.344	.603	.053	.000	2.8058+04	9.0393+01	12200	.516	.458	.027	.000	5.5982+03	2.4048+02
5800	.352	.597	.051	.000	2.7660+04	9.4710+01	12300	.521	.453	.026	.000	5.5019+03	3.4688+02
5900	.359	.591	.050	.000	2.7258+04	1.0989+02	12400	.526	.448	.026	.000	5.4083+03	5.6808+02
6000	.367	.585	.049	.000	2.6855+04	1.4261+02	12500	.532	.443	.026	.000	5.3172+03	1.1092+03
6100	.374	.578	.048	.000	2.6453+04	2.1024+02	12600	.537	.438	.025	.000	5.2286+03	2.8989+03
6200	.381	.572	.047	.000	2.6052+04	3.6271+02	12700	.542	.433	.025	.000	5.1423+03	1.3250+04
6300	.389	.566	.046	.000	2.5651+04	7.8274+02	12800	.547	.429	.025	.000	5.0585+03	8.9285+04
6400	.396	.560	.045	.000	2.5251+04	2.5265+03	12900	.552	.424	.024	.000	4.9769+03	2.8495+04
6500	.403	.553	.044	.000	2.4854+04	2.5993+04	13000	.557	.419	.024	.000	4.8976+03	4.6028+03
6600	.410	.547	.043	.000	2.4457+04	9.2609+04	13100	.561	.415	.024	.000	4.8204+03	1.4955+03
6700	.417	.541	.042	.000	2.4065+04	3.8417+03	13200	.566	.410	.024	.000	4.7452+03	6.9192+02
6800	.424	.535	.041	.000	2.3677+04	9.9696+02	13300	.571	.406	.023	.000	4.6722+03	3.8778+02
6900	.431	.528	.040	.000	2.3292+04	4.1948+02	13400	.575	.402	.023	.000	4.6011+03	2.4514+02
7000	.438	.522	.039	.000	2.2911+04	2.2262+02	13500	.580	.397	.023	.000	4.5321+03	1.6791+02
7100	.445	.516	.038	.000	2.2533+04	1.3564+02	13600	.584	.393	.023	.000	4.4649+03	1.2136+02
7200	.452	.510	.038	.000	2.2160+04	9.0599+01	13700	.588	.389	.022	.000	4.3996+03	9.1507+01
7300	.459	.504	.037	.000	2.1791+04	6.4618+01	13800	.593	.385	.022	.000	4.3360+03	7.1538+01
7400	.466	.498	.036	.000	2.1429+04	4.8401+01	13900	.597	.381	.022	.000	4.2743+03	5.7607+01
7500	.473	.492	.035	.000	2.1071+04	3.7650+01	14000	.601	.377	.022	.000	4.2142+03	4.7536+01
7600	.480	.486	.035	.000	2.0720+04	3.0176+01	14100	.604	.373	.022	.000	4.1591+03	4.0038+01
7700	.487	.480	.034	.000	2.0373+04	2.4775+01	14200	.608	.370	.022	.000	4.1019+03	3.4316+01
7800	.493	.474	.033	.000	2.0033+04	2.0746+01	14300	.612	.366	.022	.000	4.0462+03	2.9860+01
7900	.500	.468	.032	.000	1.9699+04	1.7658+01	14400	.616	.363	.022	.000	3.9921+03	2.6330+01
8000	.507	.462	.032	.000	1.9373+04	1.5238+01	14500	.619	.359	.021	.000	3.9394+03	2.3492+01
8100	.513	.456	.031	.000	1.9051+04	1.3304+01	14600	.623	.356	.021	.000	3.8899+03	1.5489+02
8200	.520	.450	.031	.000	1.8734+04	1.1731+01	14700	.626	.353	.021	.000	3.8367+03	1.6690+02
8300	.526	.444	.030	.000	1.8434+04	1.5528+03	14800	.629	.350	.021	.000	3.7848+03	1.8065+02
8400	.533	.437	.029	.000	1.8140+04	3.4180+03	14900	.632	.348	.020	.000	3.7344+03	1.9619+02
8500	.304	.653	.044	.000	1.1800+04	2.9216+03	15000	.635	.345	.020	.000	3.6854+03	2.1364+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=10500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	6.1496−01	0.0000	1700	.608	.291	.101	.000	2.4228+04	3.0998+02
420	1.000	.000	.000	.000	2.8351+00	0.0000	1720	.613	.288	.099	.000	2.5760+04	2.8134+02
440	1.000	.000	.000	.000	1.1323+01	0.0000	1740	.617	.285	.098	.000	2.7341+04	2.5630+02
460	1.000	.000	.000	.000	3.9921+01	0.0000	1760	.622	.282	.096	.000	2.8970+04	2.3430+02
480	1.000	.000	.000	.000	1.2624+02	0.0000	1780	.627	.279	.094	.000	3.0647+04	2.1487+02
500	1.000	.000	.000	.000	3.6277+02	0.0000	1800	.631	.277	.092	.000	3.2371+04	1.9764+02
520	1.000	.000	.000	.000	9.5807+02	0.0000	1820	.636	.274	.090	.000	3.4141+04	1.8230+02
540	1.000	.000	.000	.000	2.3475+03	0.0000	1840	.640	.272	.088	.000	3.5950+04	1.6859+02
560	1.000	.000	.000	.000	5.3799+03	0.0000	1860	.645	.269	.086	.000	3.7803+04	1.5629+02
580	1.000	.000	.000	.000	1.1614+04	0.0000	1880	.649	.267	.084	.000	3.9697+04	1.4522+02
600	1.000	.000	.000	.000	2.3759+04	0.0000	1900	.654	.264	.082	.000	4.1633+04	1.3522+02
620	1.000	.000	.000	.000	4.6306+04	0.0000	1920	.658	.262	.080	.000	4.3610+04	1.2617+02
640	1.000	.000	.000	.000	8.6377+04	0.0000	1940	.662	.260	.079	.000	4.5626+04	1.1795+02
660	1.000	.000	.000	.000	1.5484+05	0.0000	1960	.666	.257	.077	.000	4.7681+04	1.1046+02
680	1.000	.000	.000	.000	2.6768+05	0.0000	1980	.670	.255	.075	.000	4.9773+04	1.0363+02
700	1.000	.000	.000	.000	4.4770+05	0.0000	2000	.674	.253	.073	.000	5.1902+04	9.7381+01
720	1.000	.000	.000	.000	7.2648+05	0.0000	2020	.678	.250	.072	.000	5.4092+04	9.1649+01
740	1.000	.000	.000	.000	1.1438+06	0.0000	2040	.681	.248	.071	.000	5.6317+04	8.6382+01
760	1.000	.000	.000	.000	1.7519+06	0.0000	2060	.685	.246	.069	.000	5.8576+04	8.1531+01
780	1.000	.000	.000	.000	2.6211+06	0.0000	2080	.688	.244	.068	.000	6.0867+04	7.7055+01
800	1.000	.000	.000	.000	3.8375+06	0.0000	2100	.692	.242	.067	.000	6.3190+04	7.2918+01
820	1.000	.000	.000	.000	5.5068+06	0.0000	2120	.695	.239	.066	.000	6.5542+04	6.9087+01
840	1.000	.000	.000	.000	7.7534+06	0.0000	2140	.698	.237	.064	.000	6.7922+04	6.5533+01
860	1.000	.000	.000	.000	1.0730+07	0.0000	2160	.702	.235	.063	.000	7.0330+04	6.2231+01
880	1.000	.000	.000	.000	1.4612+07	0.0000	2180	.705	.233	.062	.000	7.2763+04	5.9159+01
900	1.000	.000	.000	.000	1.9601+07	0.0000	2200	.708	.231	.061	.000	7.5221+04	5.6296+01
920	.395	.515	.090	.000	1.4427+02	3.0681+04	2220	.711	.229	.060	.000	7.7701+04	5.3625+01
940	.397	.499	.105	.000	1.8866+02	3.8038+05	2240	.714	.227	.059	.000	8.0203+04	5.1128+01
960	.398	.482	.120	.000	2.4410+02	5.5210+05	2260	.717	.225	.058	.000	8.2726+04	4.8792+01
980	.398	.466	.135	.000	3.1260+02	9.3697+05	2280	.720	.223	.056	.000	8.5267+04	4.6603+01
1000	.398	.451	.151	.000	3.9636+02	1.2245+05	2300	.723	.221	.055	.000	8.7826+04	4.4550+01
1020	.398	.436	.166	.000	4.9769+02	3.6611+06	2320	.726	.219	.054	.000	9.0402+04	4.2622+01
1040	.398	.422	.179	.000	6.1894+02	3.6416+05	2340	.729	.218	.053	.000	9.2992+04	4.0809+01
1060	.399	.409	.192	.000	7.6244+02	4.7187+04	2360	.732	.216	.052	.000	9.5597+04	3.9103+01
1080	.399	.397	.204	.000	9.3040+02	2.0815+04	2380	.735	.214	.051	.000	9.8214+04	3.7495+01
1100	.400	.386	.213	.000	1.1248+03	1.6173+04	2400	.737	.212	.050	.000	1.0084+05	3.5979+01
1120	.402	.377	.221	.000	1.3475+03	1.8506+04	2420	.740	.210	.049	.000	1.0348+05	3.4547+01
1140	.405	.368	.227	.000	1.5999+03	2.8304+04	2440	.743	.209	.048	.000	1.0613+05	3.3195+01
1160	.408	.360	.232	.000	1.8831+03	5.6990+04	2460	.745	.207	.048	.000	1.0879+05	3.1915+01
1180	.412	.354	.234	.000	2.1978+03	1.7055+05	2480	.748	.205	.047	.000	1.1145+05	3.0704+01
1200	.417	.348	.234	.000	2.5446+03	1.3430+06	2500	.751	.204	.046	.000	1.1412+05	2.9557+01
1220	.423	.344	.233	.000	2.9235+03	3.2098+07	2520	.753	.202	.045	.000	1.1679+05	2.8469+01
1240	.430	.340	.230	.000	3.3347+03	4.4509+05	2540	.756	.200	.044	.000	1.1946+05	2.7436+01
1260	.437	.337	.225	.000	3.7779+03	9.8302+04	2560	.758	.199	.043	.000	1.2212+05	2.6455+01
1280	.446	.335	.219	.000	4.2533+03	3.8839+04	2580	.760	.197	.042	.000	1.2479+05	2.5523+01
1300	.455	.333	.212	.000	4.7606+03	1.9968+04	2600	.763	.196	.042	.000	1.2745+05	2.4636+01
1320	.464	.332	.204	.000	5.2999+03	1.1921+04	2620	.765	.194	.041	.000	1.3011+05	2.3792+01
1340	.474	.331	.195	.000	5.8710+03	7.8280+03	2640	.767	.192	.040	.000	1.3277+05	2.2988+01
1360	.484	.330	.186	.000	6.4750+03	5.4884+03	2660	.770	.191	.039	.000	1.3543+05	2.2221+01
1380	.495	.329	.176	.000	7.1128+03	4.0355+03	2680	.772	.189	.039	.000	1.3809+05	2.1490+01
1400	.505	.329	.166	.000	7.7854+03	3.0760+03	2700	.774	.188	.038	.000	1.4074+05	2.0792+01
1420	.516	.328	.156	.000	8.4942+03	2.4118+03	2720	.776	.186	.037	.000	1.4339+05	2.0126+01
1440	.527	.328	.146	.000	9.2407+03	1.9343+03	2740	.778	.185	.037	.000	1.4603+05	1.9489+01
1460	.537	.327	.136	.000	1.0027+04	1.5807+03	2760	.780	.183	.037	.000	1.4876+05	1.8881+01
1480	.548	.326	.126	.000	1.0853+04	1.3121+03	2780	.782	.182	.036	.000	1.5140+05	1.8298+01
1500	.558	.325	.117	.000	1.1723+04	1.1038+03	2800	.784	.181	.036	.000	1.5402+05	1.7741+01
1520	.563	.321	.116	.000	1.2739+04	9.3930+02	2820	.786	.179	.035	.000	1.5663+05	1.7207+01
1540	.568	.317	.114	.000	1.3807+04	8.0743+02	2840	.788	.178	.034	.000	1.5923+05	1.6695+01
1560	.573	.314	.113	.000	1.4928+04	7.0025+02	2860	.790	.176	.034	.000	1.6182+05	1.6204+01
1580	.578	.310	.111	.000	1.6101+04	6.1211+02	2880	.792	.175	.033	.000	1.6440+05	1.5734+01
1600	.583	.307	.110	.000	1.7326+04	5.3885+02	2900	.794	.174	.033	.000	1.6697+05	1.5282+01
1620	.588	.303	.108	.000	1.8604+04	4.7739+02	2920	.795	.172	.032	.000	1.6952+05	1.4849+01
1640	.593	.300	.107	.000	1.9933+04	4.2537+02	2940	.797	.171	.032	.000	1.7206+05	1.4432+01
1660	.598	.297	.105	.000	2.1314+04	3.8101+02	2960	.799	.170	.031	.000	1.7459+05	1.4032+01
1680	.603	.294	.103	.000	2.2746+04	3.4291+02	2980	.801	.169	.031	.000	1.7710+05	1.3647+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=10500$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.803	.167	.030	.000	1.7960+05	1.3276+01	8600	.409	.553	.038	.000	1.8515+04	5.3557+03
3020	.804	.166	.030	.000	1.8208+05	1.2920+01	8700	.415	.547	.037	.000	1.8148+04	7.0514+03
3040	.806	.165	.029	.000	1.8454+05	1.2577+01	8800	.421	.542	.037	.000	1.7790+04	8.3277+03
3060	.808	.163	.029	.000	1.8699+05	1.2247+01	8900	.427	.536	.036	.000	1.7441+04	9.6307+03
3080	.809	.162	.028	.000	1.8942+05	1.1928+01	9000	.433	.531	.036	.000	1.7100+04	9.8236+03
3100	.811	.161	.028	.000	1.9184+05	1.1621+01	9100	.440	.525	.035	.000	1.6767+04	1.0958+04
3120	.813	.160	.027	.000	1.9423+05	1.1325+01	9200	.446	.520	.035	.000	1.6443+04	1.1752+04
3140	.814	.159	.027	.000	1.9661+05	1.1040+01	9300	.452	.514	.034	.000	1.6126+04	1.0902+04
3160	.816	.157	.027	.000	1.9896+05	1.0764+01	9400	.458	.509	.034	.000	1.5818+11	1.1083+11
3180	.818	.156	.026	.000	2.0128+05	1.0498+01	9500	.464	.503	.033	.000	1.5517+11	1.2677+11
3200	.819	.155	.026	.000	2.0359+05	1.0242+01	9600	.470	.498	.032	.000	1.5223+11	1.1874+11
3220	.821	.154	.025	.000	2.0588+05	9.9936+00	9700	.476	.493	.032	.000	1.4937+11	8.0342+10
3240	.822	.153	.025	.000	2.0815+05	9.7539+00	9800	.481	.487	.031	.000	1.4658+11	6.5237+10
3260	.824	.152	.025	.000	2.1039+05	9.5221+00	9900	.487	.482	.031	.000	1.4387+11	1.0237+11
3280	.825	.151	.024	.000	2.1262+05	9.2980+00	10000	.493	.476	.030	.000	1.4121+11	2.1945+11
3300	.827	.150	.024	.000	2.1483+05	9.0812+00	10100	.499	.471	.030	.000	1.3863+11	2.1402+11
3320	.828	.149	.023	.000	2.1701+05	8.8715+00	10200	.505	.466	.029	.000	1.3610+11	9.0461+10
3340	.829	.147	.023	.000	2.1918+05	8.6685+00	10300	.511	.461	.029	.000	1.3364+11	3.9237+10
3360	.831	.146	.023	.000	2.2132+05	8.4719+00	10400	.516	.455	.028	.000	1.3124+11	2.2959+10
3380	.832	.145	.022	.000	2.2344+05	8.2815+00	10500	.522	.450	.028	.000	1.2891+11	1.9560+10
3400	.834	.144	.022	.000	2.2554+05	8.0971+00	10600	.528	.445	.027	.000	1.2663+11	2.5109+10
3420	.835	.143	.022	.000	2.2761+05	7.9184+00	10700	.534	.440	.026	.000	1.2441+11	4.9272+10
3440	.836	.142	.021	.000	2.2966+05	7.7452+00	10800	.539	.435	.026	.000	1.2224+11	1.4618+11
3460	.838	.141	.021	.000	2.3170+05	7.5772+00	10900	.545	.430	.025	.000	1.2013+11	2.7761+11
3480	.839	.140	.021	.000	2.3371+05	7.4143+00	11000	.550	.425	.025	.000	1.1807+11	3.0793+11
3500	.840	.139	.020	.000	2.3569+05	7.2562+00	11100	.555	.420	.025	.000	1.1620+11	1.0788+11
3520	.841	.138	.021	.000	2.3780+05	7.1029+00	11200	.561	.415	.025	.000	1.1426+11	3.7147+10
3540	.842	.137	.020	.000	2.3975+05	6.9540+00	11300	.566	.410	.024	.000	1.1237+11	1.7310+10
3560	.843	.136	.020	.000	2.4169+05	6.8095+00	11400	.573	.403	.024	.000	1.1110+11	1.0016+10
3580	.845	.135	.020	.000	2.4359+05	6.6692+00	11500	.579	.398	.024	.000	1.0930+04	6.7690+02
5100	.390	.553	.056	.000	4.9432+04	1.8469+03	11600	.584	.393	.023	.000	1.0754+04	5.1594+02
5200	.399	.546	.055	.000	4.8922+04	8.6606+02	11700	.589	.388	.023	.000	1.0583+04	4.3428+02
5300	.407	.540	.053	.000	4.8392+04	5.2347+02	11800	.594	.384	.022	.000	1.0416+04	3.9975+02
5400	.416	.533	.051	.000	4.7843+04	3.6903+02	11900	.599	.379	.022	.000	1.0253+04	4.0066+02
5500	.424	.526	.050	.000	4.7277+04	2.9089+02	12000	.603	.375	.022	.000	1.0094+04	4.3649+02
5600	.433	.519	.048	.000	4.6700+04	2.5222+02	12100	.608	.370	.021	.000	9.9389+03	5.1806+02
5700	.441	.513	.047	.000	4.6115+04	2.3979+02	12200	.613	.366	.021	.000	9.7877+03	6.7469+02
5800	.449	.506	.045	.000	4.5527+04	2.5088+02	12300	.618	.362	.021	.000	9.6403+03	9.7600+02
5900	.457	.499	.044	.000	4.4932+04	2.9092+02	12400	.622	.357	.021	.000	9.4966+03	1.6033+03
6000	.465	.493	.043	.000	4.4334+04	3.7759+02	12500	.627	.353	.020	.000	9.3564+03	3.1484+03
6100	.472	.486	.041	.000	4.3739+04	5.5684+02	12600	.631	.349	.020	.000	9.2197+03	8.1544+03
6200	.480	.480	.040	.000	4.3141+04	9.6088+02	12700	.636	.345	.020	.000	9.0864+03	3.3599+04
6300	.487	.473	.039	.000	4.2545+04	2.0731+03	12800	.640	.341	.019	.000	8.9563+03	1.2015+05
6400	.495	.467	.038	.000	4.1950+04	6.6855+03	12900	.644	.337	.019	.000	8.8295+03	6.4148+04
6500	.502	.460	.038	.000	4.1357+04	6.8643+04	13000	.648	.333	.019	.000	8.7059+03	1.2742+04
6600	.510	.454	.037	.000	4.0765+04	2.4377+05	13100	.652	.329	.019	.000	8.5851+03	4.2344+03
6700	.517	.447	.036	.000	4.0180+04	1.0161+04	13200	.656	.325	.018	.000	8.4673+03	1.9555+03
6800	.524	.441	.035	.000	3.9599+04	2.6401+03	13300	.660	.322	.018	.000	8.3525+03	1.0922+03
6900	.531	.435	.034	.000	3.9023+04	1.1113+03	13400	.664	.318	.018	.000	8.2405+03	6.8730+02
7000	.538	.429	.033	.000	3.8451+04	5.8970+02	13500	.668	.315	.018	.000	8.1312+03	4.6991+02
7100	.545	.423	.033	.000	3.7883+04	3.5911+02	13600	.671	.311	.017	.000	8.0247+03	3.4092+02
7200	.552	.417	.032	.000	3.7321+04	2.3968+02	13700	.675	.308	.017	.000	7.9207+03	2.5841+02
7300	.558	.411	.031	.000	3.6766+04	1.7078+02	13800	.678	.305	.017	.000	7.8193+03	2.0227+02
7400	.565	.405	.030	.000	3.6219+04	1.2778+02	13900	.682	.301	.017	.000	7.7205+03	1.6261+02
7500	.572	.399	.030	.000	3.5679+04	9.9281+01	14000	.685	.298	.017	.000	7.6240+03	1.3385+02
7600	.578	.393	.029	.000	3.5146+04	7.9479+01	14100	.688	.295	.017	.000	7.5344+03	1.1249+02
7700	.584	.387	.028	.000	3.4621+04	6.5178+01	14200	.691	.292	.017	.000	7.4420+03	9.6215+01
7800	.591	.382	.028	.000	3.4104+04	5.4516+01	14300	.694	.289	.017	.000	7.3518+03	8.3570+01
7900	.597	.376	.027	.000	3.3596+04	4.6352+01	14400	.697	.286	.016	.000	7.2638+03	7.3569+01
8000	.603	.370	.026	.000	3.3102+04	3.9958+01	14500	.700	.284	.016	.000	7.1779+03	6.5543+01
8100	.609	.365	.026	.000	3.2610+04	3.4851+01	14600	.703	.281	.016	.000	7.0959+03	3.1931+02
8200	.615	.359	.025	.000	3.2125+04	3.0703+01	14700	.705	.279	.016	.000	7.0076+03	3.3761+02
8300	.622	.354	.025	.000	3.1669+04	2.8716+03	14800	.708	.277	.016	.000	6.9213+03	3.5894+02
8400	.628	.348	.024	.000	3.1222+04	3.7022+03	14900	.710	.274	.015	.000	6.8371+03	3.8320+02
8500	.403	.558	.039	.000	1.8891+04	4.4727+03	15000	.712	.272	.015	.000	6.7549+03	4.1040+02

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TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=11000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	2.6931+00	0.0000	1700	.674	.244	.083	.000	4.8947+04	6.8042+02
420	1.000	.000	.000	.000	1.1528+01	0.0000	1720	.678	.241	.081	.000	5.1894+04	6.1784+02
440	1.000	.000	.000	.000	4.3039+01	0.0000	1740	.682	.238	.080	.000	5.4927+04	5.6309+02
460	1.000	.000	.000	.000	1.4269+02	0.0000	1760	.687	.235	.078	.000	5.8044+04	5.1496+02
480	1.000	.000	.000	.000	4.2646+02	0.0000	1780	.691	.233	.076	.000	6.1244+04	4.7244+02
500	1.000	.000	.000	.000	1.1635+03	0.0000	1800	.695	.230	.075	.000	6.4525+04	4.3472+02
520	1.000	.000	.000	.000	2.9291+03	0.0000	1820	.699	.228	.073	.000	6.7886+04	4.0111+02
540	1.000	.000	.000	.000	6.8655+03	0.0000	1840	.703	.225	.072	.000	7.1312+04	3.7106+02
560	1.000	.000	.000	.000	1.5099+04	0.0000	1860	.707	.223	.070	.000	7.4810+04	3.4410+02
580	1.000	.000	.000	.000	3.1369+04	0.0000	1880	.711	.221	.068	.000	7.8380+04	3.1982+02
600	1.000	.000	.000	.000	6.1917+04	0.0000	1900	.715	.218	.067	.000	8.2019+04	2.9789+02
620	1.000	.000	.000	.000	1.1670+05	0.0000	1920	.718	.216	.065	.000	8.5727+04	2.7803+02
640	1.000	.000	.000	.000	2.1096+05	0.0000	1940	.722	.214	.064	.000	8.9499+04	2.5998+02
660	1.000	.000	.000	.000	3.6717+05	0.0000	1960	.726	.212	.062	.000	9.3335+04	2.4355+02
680	1.000	.000	.000	.000	6.1738+05	0.0000	1980	.729	.210	.061	.000	9.7232+04	2.2854+02
700	1.000	.000	.000	.000	1.0059+06	0.0000	2000	.733	.208	.059	.000	1.0119+05	2.1481+02
720	1.000	.000	.000	.000	1.5924+06	0.0000	2020	.736	.206	.058	.000	1.0524+05	2.0221+02
740	1.000	.000	.000	.000	2.4493+06	0.0000	2040	.739	.204	.057	.000	1.0935+05	1.9063+02
760	1.000	.000	.000	.000	3.6693+06	0.0000	2060	.742	.202	.056	.000	1.1351+05	1.7996+02
780	1.000	.000	.000	.000	5.3756+06	0.0000	2080	.745	.200	.055	.000	1.1772+05	1.7011+02
800	1.000	.000	.000	.000	7.7146+06	0.0000	2100	.748	.198	.054	.000	1.2198+05	1.6101+02
820	1.000	.000	.000	.000	1.0862+07	0.0000	2120	.751	.196	.053	.000	1.2629+05	1.5258+02
840	1.000	.000	.000	.000	1.5020+07	0.0000	2140	.754	.194	.052	.000	1.3064+05	1.4476+02
860	1.000	.000	.000	.000	2.0430+07	0.0000	2160	.757	.192	.051	.000	1.3503+05	1.3749+02
880	1.000	.000	.000	.000	2.7368+07	0.0000	2180	.760	.190	.050	.000	1.3946+05	1.3073+02
900	1.000	.000	.000	.000	3.6139+07	0.0000	2200	.762	.188	.049	.000	1.4392+05	1.2442+02
920	.465	.456	.079	.000	3.7428+02	7.6260+04	2220	.765	.187	.048	.000	1.4842+05	1.1853+02
940	.467	.442	.091	.000	4.8232+02	9.9473+05	2240	.768	.185	.047	.000	1.5295+05	1.1303+02
960	.468	.428	.104	.000	6.1518+02	1.4156+06	2260	.770	.183	.046	.000	1.5750+05	1.0788+02
980	.469	.414	.116	.000	7.7682+02	2.3866+06	2280	.773	.181	.046	.000	1.6208+05	1.0306+02
1000	.470	.401	.129	.000	9.7155+02	2.9453+05	2300	.776	.180	.045	.000	1.6669+05	9.8534+01
1020	.471	.388	.141	.000	1.2038+03	8.7851+06	2320	.778	.178	.044	.000	1.7131+05	9.4282+01
1040	.471	.376	.153	.000	1.4780+03	8.6940+05	2340	.780	.176	.043	.000	1.7596+05	9.0285+01
1060	.472	.365	.163	.000	1.7984+03	1.1139+05	2360	.783	.175	.042	.000	1.8062+05	8.6521+01
1080	.473	.355	.172	.000	2.1692+03	4.8233+04	2380	.785	.173	.041	.000	1.8530+05	8.2975+01
1100	.475	.345	.180	.000	2.5938+03	3.6556+04	2400	.788	.172	.041	.000	1.8999+05	7.9629+01
1120	.477	.336	.187	.000	3.0754+03	4.0945+04	2420	.790	.170	.040	.000	1.9469+05	7.6470+01
1140	.480	.329	.192	.000	3.6167+03	6.1850+04	2440	.792	.169	.039	.000	1.9939+05	7.3485+01
1160	.483	.322	.195	.000	4.2194+03	1.2388+05	2460	.794	.167	.038	.000	2.0411+05	7.0661+01
1180	.488	.316	.196	.000	4.8850+03	3.7005+05	2480	.797	.166	.038	.000	2.0883+05	6.7987+01
1200	.493	.311	.196	.000	5.6144+03	2.9080+06	2500	.799	.164	.037	.000	2.1355+05	6.5453+01
1220	.499	.306	.195	.000	6.4079+03	6.9309+07	2520	.801	.163	.036	.000	2.1827+05	6.3050+01
1240	.506	.302	.192	.000	7.2657+03	9.6481+05	2540	.803	.161	.036	.000	2.2297+05	6.0769+01
1260	.514	.299	.188	.000	8.1879+03	2.1319+05	2560	.805	.160	.035	.000	2.2765+05	5.8602+01
1280	.522	.296	.183	.000	9.1744+03	8.4185+04	2580	.807	.159	.034	.000	2.3233+05	5.6542+01
1300	.530	.293	.177	.000	1.0225+04	4.3258+04	2600	.809	.157	.034	.000	2.3700+05	5.4583+01
1320	.540	.291	.170	.000	1.1341+04	2.5818+04	2620	.811	.156	.033	.000	2.4166+05	5.2718+01
1340	.549	.289	.162	.000	1.2520+04	1.6956+04	2640	.813	.155	.032	.000	2.4631+05	5.0941+01
1360	.559	.287	.154	.000	1.3766+04	1.1893+04	2660	.815	.153	.032	.000	2.5095+05	4.9247+01
1380	.569	.286	.146	.000	1.5079+04	8.7507+03	2680	.817	.152	.031	.000	2.5558+05	4.7631+01
1400	.579	.284	.137	.000	1.6463+04	6.6757+03	2700	.819	.151	.031	.000	2.6019+05	4.6088+01
1420	.589	.283	.129	.000	1.7917+04	5.2388+03	2720	.820	.149	.030	.000	2.6479+05	4.4615+01
1440	.599	.281	.120	.000	1.9447+04	4.2058+03	2740	.822	.148	.030	.000	2.6937+05	4.3207+01
1460	.608	.279	.112	.000	2.1053+04	3.4402+03	2760	.823	.147	.030	.000	2.7407+05	4.1861+01
1480	.618	.278	.104	.000	2.2738+04	2.8583+03	2780	.825	.146	.029	.000	2.7862+05	4.0573+01
1500	.627	.276	.097	.000	2.4505+04	2.4067+03	2800	.827	.145	.029	.000	2.8315+05	3.9339+01
1520	.632	.272	.096	.000	2.6525+04	2.0499+03	2820	.829	.143	.028	.000	2.8765+05	3.8158+01
1540	.637	.269	.094	.000	2.8640+04	1.7635+03	2840	.830	.142	.028	.000	2.9212+05	3.7026+01
1560	.642	.265	.093	.000	3.0850+04	1.5306+03	2860	.832	.141	.027	.000	2.9658+05	3.5941+01
1580	.646	.262	.092	.000	3.3156+04	1.3390+03	2880	.833	.140	.027	.000	3.0100+05	3.4899+01
1600	.651	.259	.090	.000	3.5557+04	1.1795+03	2900	.835	.139	.026	.000	3.0540+05	3.3900+01
1620	.656	.255	.089	.000	3.8051+04	1.0456+03	2920	.837	.138	.026	.000	3.0977+05	3.2940+01
1640	.660	.252	.087	.000	4.0639+04	9.3225+02	2940	.838	.136	.025	.000	3.1411+05	3.2018+01
1660	.665	.249	.086	.000	4.3318+04	8.3549+02	2960	.840	.135	.025	.000	3.1842+05	3.1132+01
1680	.669	.246	.084	.000	4.6088+04	7.5234+02	2980	.841	.134	.025	.000	3.2270+05	3.0280+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=11000\ K$

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.843	.133	.024	.000	3.2695+05	2.9460+01	8600	.509	.459	.032	.000	2.9188+04	8.9401+03
3020	.844	.132	.024	.000	3.3116+05	2.8671+01	8700	.515	.454	.032	.000	2.8670+04	1.1385+04
3040	.845	.131	.023	.000	3.3534+05	2.7911+01	8800	.521	.448	.031	.000	2.8164+04	1.3680+04
3060	.847	.130	.023	.000	3.3949+05	2.7180+01	8900	.527	.443	.031	.000	2.7669+04	1.5719+04
3080	.848	.129	.023	.000	3.4360+05	2.6475+01	9000	.533	.437	.030	.000	2.7186+04	1.6475+04
3100	.850	.128	.022	.000	3.4768+05	2.5795+01	9100	.539	.432	.030	.000	2.6713+04	1.8583+04
3120	.851	.127	.022	.000	3.5172+05	2.5140+01	9200	.544	.427	.029	.000	2.6252+04	1.9267+04
3140	.852	.126	.022	.000	3.5573+05	2.4507+01	9300	.550	.421	.029	.000	2.5801+04	1.9879+04
3160	.854	.125	.021	.000	3.5968+05	2.3897+01	9400	.556	.416	.028	.000	2.5361+04	2.0569+04
3180	.855	.124	.021	.000	3.6358+05	2.3308+01	9500	.562	.411	.027	.000	2.4931+04	2.0876+04
3200	.856	.123	.021	.000	3.6745+05	2.2739+01	9600	.567	.406	.027	.000	2.4511+04	1.9583+04
3220	.857	.122	.020	.000	3.7128+05	2.2189+01	9700	.573	.401	.026	.000	2.4101+04	1.6188+04
3240	.859	.121	.020	.000	3.7507+05	2.1658+01	9800	.579	.395	.026	.000	2.3701+04	1.4714+04
3260	.860	.120	.020	.000	3.7882+05	2.1144+01	9900	.584	.390	.025	.000	2.3310+04	2.0532+04
3280	.861	.119	.019	.000	3.8254+05	2.0648+01	10000	.590	.386	.025	.000	2.2928+04	3.5945+04
3300	.862	.119	.019	.000	3.8621+05	2.0167+01	10100	.595	.381	.024	.000	2.2555+04	3.4927+04
3320	.863	.118	.019	.000	3.8984+05	1.9703+01	10200	.600	.376	.024	.000	2.2190+04	1.7839+04
3340	.865	.117	.019	.000	3.9344+05	1.9253+01	10300	.606	.371	.023	.000	2.1834+04	9.1623+03
3360	.866	.116	.018	.000	3.9699+05	1.8817+01	10400	.611	.366	.023	.000	2.1486+04	5.7183+03
3380	.867	.115	.018	.000	4.0050+05	1.8395+01	10500	.616	.362	.022	.000	2.1147+04	4.9659+03
3400	.868	.114	.018	.000	4.0397+05	1.7986+01	10600	.621	.357	.022	.000	2.0815+04	6.3351+03
3420	.869	.113	.017	.000	4.0739+05	1.7590+01	10700	.626	.352	.021	.000	2.0491+04	1.1882+04
3440	.870	.113	.017	.000	4.1077+05	1.7206+01	10800	.631	.348	.021	.000	2.0175+04	2.9557+04
3460	.871	.112	.017	.000	4.1411+05	1.6833+01	10900	.636	.343	.020	.000	1.9866+04	3.5314+04
3480	.872	.111	.017	.000	4.1741+05	1.6472+01	11000	.641	.339	.020	.000	1.9564+04	4.4509+04
3500	.873	.110	.016	.000	4.2067+05	1.6122+01	11100	.645	.334	.020	.000	1.9288+04	2.3146+04
3520	.874	.109	.017	.000	4.2409+05	1.5781+01	11200	.650	.330	.020	.000	1.9002+04	9.0722+03
3540	.875	.108	.016	.000	4.2728+05	1.5451+01	11300	.655	.326	.020	.000	1.8722+04	4.3689+03
3560	.876	.108	.016	.000	4.3044+05	1.5131+01	11400	.661	.320	.019	.000	1.8572+04	2.5424+03
3580	.877	.107	.016	.000	4.3355+05	1.4820+01	11500	.666	.315	.019	.000	1.8304+04	1.7152+03
5100	.483	.468	.049	.000	7.8576+04	4.5391+03	11600	.670	.311	.018	.000	1.8043+04	1.3016+03
5200	.492	.460	.047	.000	7.7864+04	2.1218+03	11700	.675	.307	.018	.000	1.7787+04	1.0914+03
5300	.501	.453	.046	.000	7.7124+04	1.2784+03	11800	.679	.303	.018	.000	1.7536+04	1.0008+03
5400	.510	.446	.044	.000	7.6351+04	8.9847+02	11900	.683	.300	.017	.000	1.7292+04	1.0006+03
5500	.518	.439	.043	.000	7.5552+04	7.0602+02	12000	.687	.296	.017	.000	1.7053+04	1.0899+03
5600	.526	.433	.041	.000	7.4736+04	6.1018+02	12100	.691	.292	.017	.000	1.6819+04	1.2963+03
5700	.534	.426	.040	.000	7.3905+04	5.7818+02	12200	.695	.288	.017	.000	1.6591+04	1.6943+03
5800	.542	.419	.039	.000	7.3066+04	6.0298+02	12300	.699	.285	.016	.000	1.6367+04	2.4543+03
5900	.550	.412	.037	.000	7.2217+04	6.9723+02	12400	.703	.281	.016	.000	1.6149+04	4.0549+03
6000	.558	.406	.036	.000	7.1362+04	9.0281+02	12500	.706	.278	.016	.000	1.5935+04	7.9167+03
6100	.565	.399	.035	.000	7.0505+04	1.3290+03	12600	.710	.274	.015	.000	1.5726+04	2.0010+04
6200	.573	.393	.034	.000	6.9644+04	2.2901+03	12700	.714	.271	.015	.000	1.5522+04	7.2091+04
6300	.580	.387	.033	.000	6.8782+04	4.9347+03	12800	.717	.268	.015	.000	1.5322+04	1.4677+05
6400	.587	.381	.032	.000	6.7920+04	1.5890+04	12900	.721	.265	.015	.000	1.5127+04	1.2266+05
6500	.594	.374	.031	.000	6.7060+04	1.6276+05	13000	.724	.262	.015	.000	1.4936+04	3.0385+04
6600	.601	.368	.031	.000	6.6199+04	1.0433+06	13100	.727	.258	.014	.000	1.4749+04	1.0616+04
6700	.608	.362	.030	.000	6.5345+04	2.4141+04	13200	.730	.255	.014	.000	1.4567+04	4.9339+03
6800	.614	.356	.029	.000	6.4496+04	6.2811+03	13300	.734	.253	.014	.000	1.4388+04	2.7516+03
6900	.621	.351	.028	.000	6.3653+04	2.6463+03	13400	.737	.250	.014	.000	1.4213+04	1.7270+03
7000	.627	.345	.028	.000	6.2814+04	1.4050+03	13500	.740	.247	.014	.000	1.4042+04	1.1770+03
7100	.634	.339	.027	.000	6.1978+04	8.5582+02	13600	.742	.244	.013	.000	1.3875+04	8.5160+02
7200	.640	.334	.026	.000	6.1150+04	5.7126+02	13700	.745	.242	.013	.000	1.3711+04	6.4492+02
7300	.646	.328	.026	.000	6.0330+04	4.0705+02	13800	.748	.239	.013	.000	1.3551+04	5.0616+02
7400	.652	.323	.025	.000	5.9520+04	3.0454+02	13900	.751	.236	.013	.000	1.3395+04	4.0854+02
7500	.658	.318	.024	.000	5.8719+04	2.3660+02	14000	.753	.234	.013	.000	1.3242+04	3.3691+02
7600	.664	.313	.024	.000	5.7927+04	1.8939+02	14100	.756	.231	.013	.000	1.3098+04	2.8303+02
7700	.669	.307	.023	.000	5.7145+04	1.5529+02	14200	.758	.229	.013	.000	1.2950+04	2.4167+02
7800	.675	.302	.022	.000	5.6373+04	1.2987+02	14300	.760	.227	.013	.000	1.2806+04	2.0950+02
7900	.681	.297	.022	.000	5.5611+04	1.1041+02	14400	.763	.225	.012	.000	1.2665+04	1.8410+02
8000	.686	.293	.021	.000	5.4875+04	9.5172+01	14500	.765	.223	.012	.000	1.2527+04	1.6374+02
8100	.691	.288	.021	.000	5.4136+04	8.3001+01	14600	.767	.221	.012	.000	1.2393+04	6.0896+02
8200	.697	.283	.020	.000	5.3404+04	7.3117+01	14700	.769	.219	.012	.000	1.2249+04	6.3313+02
8300	.702	.278	.020	.000	5.2722+04	5.0808+03	14800	.771	.217	.012	.000	1.2108+04	6.6267+02
8400	.707	.273	.019	.000	5.2052+04	6.3535+03	14900	.773	.216	.012	.000	1.1970+04	6.9714+02
8500	.502	.465	.033	.000	2.9718+04	7.5211+03	15000	.774	.214	.012	.000	1.1835+04	7.3647+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=11500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.0201+01	0.0000	1700	.730	.202	.068	.000	9.2798+04	1.3645+03
420	1.000	.000	.000	.000	4.0808+01	0.0000	1720	.734	.200	.066	.000	9.8119+04	1.2396+03
440	1.000	.000	.000	.000	1.4326+02	0.0000	1740	.738	.197	.065	.000	1.0358+05	1.1303+03
460	1.000	.000	.000	.000	4.4900+02	0.0000	1760	.741	.195	.064	.000	1.0918+05	1.0341+03
480	1.000	.000	.000	.000	1.2746+03	0.0000	1780	.745	.193	.062	.000	1.1491+05	9.4905+02
500	1.000	.000	.000	.000	3.3165+03	0.0000	1800	.749	.190	.061	.000	1.2078+05	8.7359+02
520	1.000	.000	.000	.000	7.9916+03	0.0000	1820	.752	.188	.060	.000	1.2677+05	8.0634+02
540	1.000	.000	.000	.000	1.7988+04	0.0000	1840	.756	.186	.058	.000	1.3286+05	7.4618+02
560	1.000	.000	.000	.000	3.8100+04	0.0000	1860	.759	.184	.057	.000	1.3906+05	6.9217+02
580	1.000	.000	.000	.000	7.6430+04	0.0000	1880	.763	.182	.056	.000	1.4538+05	6.4353+02
600	1.000	.000	.000	.000	1.4601+05	0.0000	1900	.766	.180	.054	.000	1.5180+05	5.9957+02
620	1.000	.000	.000	.000	2.6691+05	0.0000	1920	.769	.178	.053	.000	1.5833+05	5.5975+02
640	1.000	.000	.000	.000	4.6886+05	0.0000	1940	.772	.176	.052	.000	1.6496+05	5.2355+02
660	1.000	.000	.000	.000	7.9436+05	0.0000	1960	.776	.174	.050	.000	1.7168+05	4.9058+02
680	1.000	.000	.000	.000	1.3023+06	0.0000	1980	.779	.172	.049	.000	1.7850+05	4.6046+02
700	1.000	.000	.000	.000	2.0717+06	0.0000	2000	.782	.170	.048	.000	1.8540+05	4.3289+02
720	1.000	.000	.000	.000	3.2065+06	0.0000	2020	.784	.168	.047	.000	1.9245+05	4.0759+02
740	1.000	.000	.000	.000	4.8277+06	0.0000	2040	.787	.167	.046	.000	1.9957+05	3.8433+02
760	1.000	.000	.000	.000	7.0875+06	0.0000	2060	.790	.165	.045	.000	2.0678+05	3.6290+02
780	1.000	.000	.000	.000	1.0186+07	0.0000	2080	.792	.163	.045	.000	2.1405+05	3.4311+02
800	1.000	.000	.000	.000	1.4354+07	0.0000	2100	.795	.161	.044	.000	2.2140+05	3.2482+02
820	1.000	.000	.000	.000	1.9863+07	0.0000	2120	.797	.160	.043	.000	2.2880+05	3.0786+02
840	1.000	.000	.000	.000	2.7016+07	0.0000	2140	.800	.158	.042	.000	2.3627+05	2.9213+02
860	1.000	.000	.000	.000	3.6173+07	0.0000	2160	.802	.156	.041	.000	2.4379+05	2.7751+02
880	1.000	.000	.000	.000	4.7735+07	0.0000	2180	.805	.155	.041	.000	2.5136+05	2.6390+02
900	1.000	.000	.000	.000	6.2135+07	0.0000	2200	.807	.153	.040	.000	2.5897+05	2.5121+02
920	.532	.399	.068	.000	8.9143+02	1.7166+05	2220	.809	.152	.039	.000	2.6663+05	2.3937+02
940	.535	.387	.078	.000	1.1338+03	2.3727+06	2240	.812	.150	.038	.000	2.7433+05	2.2829+02
960	.537	.375	.089	.000	1.4277+03	3.3058+06	2260	.814	.149	.038	.000	2.8206+05	2.1793+02
980	.538	.363	.099	.000	1.7804+03	5.5411+06	2280	.816	.147	.037	.000	2.8982+05	2.0821+02
1000	.539	.351	.110	.000	2.1997+03	6.4226+05	2300	.818	.146	.036	.000	2.9760+05	1.9910+02
1020	.540	.340	.120	.000	2.6935+03	1.9140+07	2320	.820	.144	.035	.000	3.0540+05	1.9053+02
1040	.541	.330	.129	.000	3.2697+03	1.8822+06	2340	.822	.143	.035	.000	3.1323+05	1.8248+02
1060	.542	.321	.137	.000	3.9356+03	2.3867+05	2360	.824	.142	.034	.000	3.2107+05	1.7489+02
1080	.544	.312	.145	.000	4.6980+03	1.0170+05	2380	.826	.140	.033	.000	3.2892+05	1.6774+02
1100	.546	.303	.151	.000	5.5631+03	7.5384+04	2400	.828	.139	.033	.000	3.3677+05	1.6100+02
1120	.548	.296	.156	.000	6.5361+03	8.2765+04	2420	.830	.138	.032	.000	3.4463+05	1.5463+02
1140	.551	.289	.160	.000	7.6212+03	1.2351+05	2440	.832	.136	.032	.000	3.5250+05	1.4861+02
1160	.555	.283	.162	.000	8.8217+03	2.4605+05	2460	.834	.135	.031	.000	3.6036+05	1.4292+02
1180	.560	.277	.163	.000	1.0140+04	7.3356+05	2480	.836	.134	.030	.000	3.6821+05	1.3752+02
1200	.565	.272	.163	.000	1.1577+04	5.7525+06	2500	.838	.132	.030	.000	3.7606+05	1.3241+02
1220	.571	.268	.162	.000	1.3134+04	1.3676+08	2520	.840	.131	.029	.000	3.8389+05	1.2756+02
1240	.577	.264	.159	.000	1.4812+04	1.9105+06	2540	.841	.130	.029	.000	3.9166+05	1.2296+02
1260	.585	.260	.155	.000	1.6610+04	4.2243+05	2560	.843	.129	.028	.000	3.9940+05	1.1859+02
1280	.592	.257	.151	.000	1.8529+04	1.6675+05	2580	.845	.128	.028	.000	4.0711+05	1.1443+02
1300	.600	.254	.146	.000	2.0570+04	8.5646+04	2600	.846	.127	.027	.000	4.1480+05	1.1048+02
1320	.609	.251	.140	.000	2.2731+04	5.1106+04	2620	.848	.125	.027	.000	4.2247+05	1.0671+02
1340	.618	.249	.133	.000	2.5012+04	3.3568+04	2640	.850	.124	.026	.000	4.3010+05	1.0312+02
1360	.627	.247	.127	.000	2.7418+04	2.3555+04	2660	.851	.123	.026	.000	4.3770+05	9.9702+01
1380	.636	.245	.120	.000	2.9949+04	1.7342+04	2680	.853	.122	.025	.000	4.4527+05	9.6438+01
1400	.645	.242	.113	.000	3.2610+04	1.3240+04	2700	.854	.121	.025	.000	4.5281+05	9.3323+01
1420	.654	.240	.106	.000	3.5404+04	1.0399+04	2720	.856	.120	.024	.000	4.6031+05	9.0347+01
1440	.663	.238	.099	.000	3.8332+04	8.3562+03	2740	.857	.119	.024	.000	4.6777+05	8.7503+01
1460	.672	.236	.092	.000	4.1401+04	6.8413+03	2760	.858	.118	.024	.000	4.7537+05	8.4783+01
1480	.680	.234	.086	.000	4.4611+04	5.6894+03	2780	.860	.117	.023	.000	4.8275+05	8.2181+01
1500	.688	.232	.079	.000	4.7968+04	4.7948+03	2800	.861	.116	.023	.000	4.9008+05	7.9689+01
1520	.693	.229	.078	.000	5.1731+04	4.0874+03	2820	.862	.115	.023	.000	4.9736+05	7.7302+01
1540	.697	.225	.077	.000	5.5659+04	3.5193+03	2840	.864	.114	.022	.000	5.0459+05	7.5014+01
1560	.702	.222	.076	.000	5.9750+04	3.0568+03	2860	.865	.113	.022	.000	5.1178+05	7.2820+01
1580	.706	.219	.075	.000	6.4002+04	2.6759+03	2880	.866	.112	.022	.000	5.1890+05	7.0715+01
1600	.710	.216	.074	.000	6.8415+04	2.3589+03	2900	.868	.111	.021	.000	5.2598+05	6.8694+01
1620	.714	.213	.073	.000	7.2986+04	2.0924+03	2920	.869	.110	.021	.000	5.3299+05	6.6754+01
1640	.718	.210	.071	.000	7.7712+04	1.8667+03	2940	.870	.109	.021	.000	5.3996+05	6.4890+01
1660	.722	.208	.070	.000	8.2591+04	1.6739+03	2960	.872	.108	.020	.000	5.4686+05	6.3098+01
1680	.726	.205	.069	.000	8.7621+04	1.5080+03	2980	.873	.107	.020	.000	5.5370+05	6.1374+01

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=11500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.874	.106	.020	.000	5.6048+05	5.9716+01	8600	.601	.372	.027	.000	4.5070+04	1.3969+04
3020	.875	.106	.019	.000	5.6720+05	5.8120+01	8700	.607	.367	.026	.000	4.4351+04	1.7300+04
3040	.876	.105	.019	.000	5.7386+05	5.6584+01	8800	.612	.362	.026	.000	4.3648+04	2.1041+04
3060	.877	.104	.019	.000	5.8045+05	5.5103+01	8900	.618	.357	.025	.000	4.2960+04	2.3790+04
3080	.879	.103	.018	.000	5.8698+05	5.3677+01	9000	.623	.352	.025	.000	4.2286+04	2.5491+04
3100	.880	.102	.018	.000	5.9344+05	5.2302+01	9100	.629	.347	.024	.000	4.1625+04	2.9060+04
3120	.881	.101	.018	.000	5.9984+05	5.0976+01	9200	.634	.342	.024	.000	4.0979+04	2.9381+04
3140	.882	.101	.017	.000	6.0617+05	4.9696+01	9300	.639	.338	.023	.000	4.0347+04	3.3044+04
3160	.883	.100	.017	.000	6.1240+05	4.8461+01	9400	.644	.333	.023	.000	3.9728+04	3.4098+04
3180	.884	.099	.017	.000	6.1855+05	4.7269+01	9500	.649	.328	.022	.000	3.9123+04	3.3124+04
3200	.885	.098	.017	.000	6.2463+05	4.6117+01	9600	.654	.324	.022	.000	3.8531+04	3.1273+04
3220	.886	.097	.016	.000	6.3064+05	4.5005+01	9700	.659	.319	.021	.000	3.7952+04	2.9256+04
3240	.887	.097	.016	.000	6.3658+05	4.3929+01	9800	.664	.315	.021	.000	3.7386+04	2.8639+04
3260	.888	.096	.016	.000	6.4246+05	4.2890+01	9900	.669	.311	.021	.000	3.6831+04	3.6314+04
3280	.889	.095	.016	.000	6.4826+05	4.1884+01	10000	.674	.306	.020	.000	3.6289+04	5.4768+04
3300	.890	.094	.015	.000	6.5399+05	4.0912+01	10100	.678	.302	.020	.000	3.5758+04	5.3029+04
3320	.891	.094	.015	.000	6.5966+05	3.9971+01	10200	.683	.298	.019	.000	3.5237+04	3.1127+04
3340	.892	.093	.015	.000	6.6525+05	3.9059+01	10300	.688	.294	.019	.000	3.4728+04	1.8595+04
3360	.893	.092	.015	.000	6.7077+05	3.8177+01	10400	.692	.290	.018	.000	3.4230+04	1.2558+04
3380	.894	.092	.015	.000	6.7621+05	3.7322+01	10500	.696	.286	.018	.000	3.3743+04	1.1191+04
3400	.895	.091	.014	.000	6.8158+05	3.6494+01	10600	.701	.282	.017	.000	3.3266+04	1.4132+04
3420	.896	.090	.014	.000	6.8686+05	3.5692+01	10700	.705	.278	.017	.000	3.2800+04	2.4838+04
3440	.897	.089	.014	.000	6.9208+05	3.4914+01	10800	.709	.274	.017	.000	3.2343+04	5.1207+04
3460	.897	.089	.014	.000	6.9724+05	3.4160+01	10900	.714	.270	.016	.000	3.1896+04	4.2435+04
3480	.898	.088	.013	.000	7.0232+05	3.3428+01	11000	.718	.267	.016	.000	3.1458+04	5.8504+04
3500	.899	.087	.013	.000	7.0732+05	3.2718+01	11100	.721	.263	.016	.000	3.1054+04	4.2449+04
3520	.900	.087	.013	.000	7.1252+05	3.2029+01	11200	.725	.259	.016	.000	3.0637+04	1.9309+04
3540	.901	.086	.013	.000	7.1741+05	3.1360+01	11300	.729	.256	.015	.000	3.0229+04	9.7846+03
3560	.901	.086	.013	.000	7.2224+05	3.0711+01	11400	.735	.250	.015	.000	3.0071+04	5.7923+03
3580	.902	.085	.013	.000	7.2699+05	3.0080+01	11500	.738	.247	.015	.000	2.9677+04	3.9082+03
5100	.572	.387	.042	.000	1.2155+05	1.0075+04	11600	.742	.244	.014	.000	2.9292+04	2.9533+03
5200	.580	.380	.040	.000	1.2060+05	4.6937+03	11700	.745	.240	.014	.000	2.8914+04	2.4644+03
5300	.589	.373	.039	.000	1.1960+05	2.8184+03	11800	.749	.237	.014	.000	2.8543+04	2.2536+03
5400	.597	.366	.037	.000	1.1855+05	1.9744+03	11900	.752	.234	.014	.000	2.8180+04	2.2506+03
5500	.605	.359	.036	.000	1.1746+05	1.5467+03	12000	.756	.231	.013	.000	2.7825+04	2.4535+03
5600	.613	.353	.035	.000	1.1634+05	1.3328+03	12100	.759	.228	.013	.000	2.7476+04	2.9248+03
5700	.620	.346	.033	.000	1.1519+05	1.2593+03	12200	.762	.225	.013	.000	2.7135+04	3.8265+03
5800	.628	.340	.032	.000	1.1402+05	1.3099+03	12300	.765	.222	.013	.000	2.6800+04	5.5674+03
5900	.635	.334	.031	.000	1.1284+05	1.5113+03	12400	.768	.220	.012	.000	2.6472+04	9.1809+03
6000	.642	.328	.030	.000	1.1164+05	1.9535+03	12500	.771	.217	.012	.000	2.6151+04	1.7818+04
6100	.649	.322	.029	.000	1.1044+05	2.8719+03	12600	.774	.214	.012	.000	2.5836+04	4.3054+04
6200	.656	.316	.028	.000	1.0922+05	4.9434+03	12700	.777	.212	.012	.000	2.5527+04	1.3399+05
6300	.662	.311	.027	.000	1.0800+05	1.0641+04	12800	.779	.209	.012	.000	2.5224+04	1.6648+05
6400	.668	.305	.027	.000	1.0678+05	3.4221+04	12900	.782	.207	.011	.000	2.4927+04	2.0530+05
6500	.675	.299	.026	.000	1.0555+05	3.4955+05	13000	.785	.204	.011	.000	2.4636+04	6.3182+04
6600	.681	.294	.025	.000	1.0432+05	2.1274+06	13100	.787	.202	.011	.000	2.4351+04	2.3676+04
6700	.687	.289	.024	.000	1.0310+05	5.1967+04	13200	.790	.199	.011	.000	2.4071+04	1.1189+04
6800	.693	.284	.024	.000	1.0188+05	1.3538+04	13300	.792	.197	.011	.000	2.3797+04	6.2543+03
6900	.698	.278	.023	.000	1.0066+05	5.7083+03	13400	.795	.195	.010	.000	2.3529+04	3.9226+03
7000	.704	.273	.023	.000	9.9449+04	3.0320+03	13500	.797	.193	.010	.000	2.3265+04	2.6625+03
7100	.709	.269	.022	.000	9.8238+04	1.8473+03	13600	.799	.191	.010	.000	2.3007+04	1.9236+03
7200	.715	.264	.021	.000	9.7036+04	1.2331+03	13700	.801	.189	.010	.000	2.2753+04	1.4526+03
7300	.720	.259	.021	.000	9.5843+04	8.7852+02	13800	.803	.187	.010	.000	2.2505+04	1.1380+03
7400	.725	.255	.020	.000	9.4660+04	6.5716+02	13900	.806	.185	.010	.000	2.2261+04	9.1746+02
7500	.730	.250	.020	.000	9.3489+04	5.1044+02	14000	.808	.183	.010	.000	2.2022+04	7.5757+02
7600	.735	.246	.019	.000	9.2330+04	4.0847+02	14100	.809	.181	.010	.000	2.1796+04	6.3808+02
7700	.740	.241	.019	.000	9.1180+04	3.3484+02	14200	.811	.179	.010	.000	2.1565+04	5.4601+02
7800	.745	.237	.018	.000	9.0043+04	2.7995+02	14300	.813	.177	.010	.000	2.1338+04	4.7360+02
7900	.750	.233	.018	.000	8.8920+04	2.3794+02	14400	.815	.176	.009	.000	2.1116+04	4.1588+02
8000	.754	.229	.017	.000	8.7840+04	2.0504+02	14500	.816	.174	.009	.000	2.0898+04	3.6934+02
8100	.759	.225	.017	.000	8.6743+04	1.7878+02	14600	.818	.173	.009	.000	2.0686+04	1.0814+03
8200	.763	.221	.016	.000	8.5655+04	1.5745+02	14700	.819	.172	.009	.000	2.0456+04	1.1067+03
8300	.767	.217	.016	.000	8.4648+04	8.3267+03	14800	.821	.170	.009	.000	2.0231+04	1.1414+03
8400	.772	.213	.015	.000	8.3657+04	1.0230+04	14900	.822	.169	.009	.000	2.0010+04	1.1850+03
8500	.776	.209	.015	.000	8.2679+04	1.2354+04	15000	.824	.168	.009	.000	1.9793+04	1.2366+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=12000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	3.3903+01	0.0000	1700	.778	.167	.055	.000	1.6538+05	2.5138+03
420	1.000	.000	.000	.000	1.2747+02	0.0000	1720	.781	.165	.054	.000	1.7441+05	2.2847+03
440	1.000	.000	.000	.000	4.2294+02	0.0000	1740	.784	.163	.053	.000	1.8366+05	2.0841+03
460	1.000	.000	.000	.000	1.2590+03	0.0000	1760	.788	.161	.052	.000	1.9312+05	1.9075+03
480	1.000	.000	.000	.000	3.4091+03	0.0000	1780	.791	.159	.050	.000	2.0277+05	1.7513+03
500	1.000	.000	.000	.000	8.4936+03	0.0000	1800	.794	.157	.049	.000	2.1263+05	1.6127+03
520	1.000	.000	.000	.000	1.9662+04	0.0000	1820	.797	.155	.048	.000	2.2267+05	1.4890+03
540	1.000	.000	.000	.000	4.2643+04	0.0000	1840	.800	.153	.047	.000	2.3285+05	1.3784+03
560	1.000	.000	.000	.000	8.7262+04	0.0000	1860	.803	.151	.046	.000	2.4319+05	1.2790+03
580	1.000	.000	.000	.000	1.6952+05	0.0000	1880	.806	.149	.045	.000	2.5370+05	1.1895+03
600	1.000	.000	.000	.000	3.1429+05	0.0000	1900	.809	.147	.044	.000	2.6436+05	1.1085+03
620	1.000	.000	.000	.000	5.5865+05	0.0000	1920	.811	.146	.043	.000	2.7517+05	1.0352+03
640	1.000	.000	.000	.000	9.5589+05	0.0000	1940	.814	.144	.042	.000	2.8612+05	9.6849+02
660	1.000	.000	.000	.000	1.5800+06	0.0000	1960	.817	.142	.041	.000	2.9720+05	9.0772+02
680	1.000	.000	.000	.000	2.5307+06	0.0000	1980	.819	.141	.040	.000	3.0842+05	8.5219+02
700	1.000	.000	.000	.000	3.9388+06	0.0000	2000	.822	.139	.039	.000	3.1975+05	8.0134+02
720	1.000	.000	.000	.000	5.9715+06	0.0000	2020	.824	.137	.038	.000	3.3127+05	7.5468+02
740	1.000	.000	.000	.000	8.8165+06	0.0000	2040	.827	.136	.038	.000	3.4290+05	7.1176+02
760	1.000	.000	.000	.000	1.2706+07	0.0000	2060	.829	.134	.037	.000	3.5463+05	6.7220+02
780	1.000	.000	.000	.000	1.7942+07	0.0000	2080	.831	.133	.036	.000	3.6645+05	6.3568+02
800	1.000	.000	.000	.000	2.4865+07	0.0000	2100	.833	.131	.035	.000	3.7835+05	6.0189+02
820	1.000	.000	.000	.000	3.3866+07	0.0000	2120	.835	.130	.035	.000	3.9034+05	5.7059+02
840	1.000	.000	.000	.000	4.5369+07	0.0000	2140	.837	.128	.034	.000	4.0240+05	5.4153+02
860	1.000	.000	.000	.000	5.9876+07	0.0000	2160	.839	.127	.033	.000	4.1452+05	5.1451+02
880	1.000	.000	.000	.000	7.7933+07	0.0000	2180	.841	.126	.033	.000	4.2670+05	4.8936+02
900	1.000	.000	.000	.000	1.0012+08	0.0000	2200	.843	.124	.032	.000	4.3892+05	4.6590+02
920	.596	.345	.059	.000	1.9603+03	3.5232+05	2220	.845	.123	.032	.000	4.5120+05	4.4400+02
940	.598	.334	.067	.000	2.4640+03	5.1897+06	2240	.847	.122	.031	.000	4.6350+05	4.2352+02
960	.601	.324	.076	.000	3.0671+03	7.0743+06	2260	.849	.121	.030	.000	4.7584+05	4.0435+02
980	.602	.314	.084	.000	3.7821+03	1.1796+07	2280	.851	.119	.030	.000	4.8821+05	3.8638+02
1000	.604	.304	.092	.000	4.6220+03	1.2780+06	2300	.853	.118	.029	.000	5.0059+05	3.6951+02
1020	.605	.295	.100	.000	5.6003+03	3.8114+07	2320	.854	.117	.029	.000	5.1298+05	3.5366+02
1040	.606	.286	.108	.000	6.7295+03	3.7192+06	2340	.856	.116	.028	.000	5.2538+05	3.3875+02
1060	.608	.278	.115	.000	8.0217+03	4.6713+05	2360	.858	.115	.028	.000	5.3779+05	3.2471+02
1080	.609	.270	.121	.000	9.4878+03	1.9625+05	2380	.860	.113	.027	.000	5.5018+05	3.1148+02
1100	.612	.263	.126	.000	1.1137+04	1.4260+05	2400	.861	.112	.027	.000	5.6257+05	2.9899+02
1120	.614	.256	.129	.000	1.2979+04	1.5366+05	2420	.863	.111	.026	.000	5.7495+05	2.8720+02
1140	.617	.250	.132	.000	1.5018+04	2.2662+05	2440	.864	.110	.026	.000	5.8730+05	2.7605+02
1160	.621	.245	.134	.000	1.7261+04	4.4901+05	2460	.866	.109	.025	.000	5.9963+05	2.6550+02
1180	.626	.240	.135	.000	1.9710+04	1.3358+06	2480	.868	.108	.025	.000	6.1193+05	2.5551+02
1200	.631	.235	.134	.000	2.2369+04	1.0453+07	2500	.869	.107	.024	.000	6.2419+05	2.4603+02
1220	.636	.231	.133	.000	2.5239+04	2.4794+08	2520	.871	.106	.024	.000	6.3642+05	2.3705+02
1240	.642	.227	.131	.000	2.8320+04	3.4752+06	2540	.872	.105	.023	.000	6.4852+05	2.2852+02
1260	.649	.223	.128	.000	3.1613+04	7.6897+05	2560	.873	.104	.023	.000	6.6055+05	2.2041+02
1280	.656	.220	.124	.000	3.5119+04	3.0349+05	2580	.875	.103	.022	.000	6.7252+05	2.1271+02
1300	.664	.217	.119	.000	3.8838+04	1.5582+05	2600	.876	.102	.022	.000	6.8443+05	2.0537+02
1320	.671	.214	.114	.000	4.2768+04	9.2969+04	2620	.877	.101	.022	.000	6.9629+05	1.9839+02
1340	.679	.212	.109	.000	4.6907+04	6.1072+04	2640	.879	.100	.021	.000	7.0808+05	1.9174+02
1360	.687	.209	.103	.000	5.1263+04	4.2871+04	2660	.880	.099	.021	.000	7.1980+05	1.8539+02
1380	.695	.207	.098	.000	5.5838+04	3.1581+04	2680	.881	.098	.020	.000	7.3146+05	1.7934+02
1400	.703	.205	.092	.000	6.0636+04	2.4129+04	2700	.883	.097	.020	.000	7.4304+05	1.7356+02
1420	.711	.202	.086	.000	6.5661+04	1.8967+04	2720	.884	.096	.020	.000	7.5454+05	1.6804+02
1440	.719	.200	.081	.000	7.0916+04	1.5254+04	2740	.885	.096	.019	.000	7.6597+05	1.6276+02
1460	.727	.198	.075	.000	7.6407+04	1.2500+04	2760	.886	.095	.019	.000	7.7755+05	1.5771+02
1480	.734	.196	.070	.000	8.2136+04	1.0404+04	2780	.887	.094	.019	.000	7.8881+05	1.5288+02
1500	.741	.194	.065	.000	8.8107+04	8.7759+03	2800	.888	.093	.019	.000	7.9999+05	1.4826+02
1520	.745	.191	.064	.000	9.4694+04	7.4873+03	2820	.889	.092	.018	.000	8.1108+05	1.4383+02
1540	.749	.188	.063	.000	1.0154+05	6.4518+03	2840	.891	.091	.018	.000	8.2207+05	1.3958+02
1560	.753	.185	.062	.000	1.0866+05	5.6082+03	2860	.892	.091	.018	.000	8.3297+05	1.3551+02
1580	.757	.182	.061	.000	1.1602+05	4.9129+03	2880	.893	.090	.017	.000	8.4377+05	1.3160+02
1600	.760	.179	.060	.000	1.2365+05	4.3337+03	2900	.894	.089	.017	.000	8.5447+05	1.2785+02
1620	.764	.177	.059	.000	1.3152+05	3.8466+03	2920	.895	.088	.017	.000	8.6507+05	1.2424+02
1640	.768	.174	.058	.000	1.3963+05	3.4335+03	2940	.896	.088	.017	.000	8.7557+05	1.2078+02
1660	.771	.172	.057	.000	1.4798+05	3.0806+03	2960	.897	.087	.016	.000	8.8596+05	1.1745+02
1680	.774	.170	.056	.000	1.5657+05	2.7769+03	2980	.898	.086	.016	.000	8.9625+05	1.1425+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE* — Continued

$T = 12000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.899	.085	.016	.000	9.0644+05	1.1117+02	8600	.682	.297	.022	.000	6.7657+04	2.0426+04
3020	.900	.085	.016	.000	9.1651+05	1.0821+02	8700	.686	.292	.021	.000	6.6676+04	2.4803+04
3040	.901	.084	.015	.000	9.2648+05	1.0535+02	8800	.691	.288	.021	.000	6.5714+04	3.0327+04
3060	.902	.083	.015	.000	9.3633+05	1.0260+02	8900	.696	.284	.020	.000	6.4771+04	3.3705+04
3080	.903	.083	.015	.000	9.4607+05	9.9951+01	9000	.701	.279	.020	.000	6.3845+04	3.6734+04
3100	.904	.082	.015	.000	9.5571+05	9.7396+01	9100	.705	.275	.019	.000	6.2936+04	4.2524+04
3120	.904	.081	.014	.000	9.6523+05	9.4931+01	9200	.710	.271	.019	.000	6.2045+04	4.2059+04
3140	.905	.080	.014	.000	9.7464+05	9.2553+01	9300	.714	.267	.019	.000	6.1172+04	5.0280+04
3160	.906	.080	.014	.000	9.8387+05	9.0257+01	9400	.719	.263	.018	.000	6.0315+04	5.1639+04
3180	.907	.079	.014	.000	9.9297+05	8.8041+01	9500	.723	.259	.018	.000	5.9476+04	5.0225+04
3200	.908	.079	.014	.000	1.0020+06	8.5901+01	9600	.727	.255	.017	.000	5.8654+04	4.8099+04
3220	.909	.078	.013	.000	1.0108+06	8.3832+01	9700	.731	.252	.017	.000	5.7847+04	4.8119+04
3240	.910	.077	.013	.000	1.0196+06	8.1833+01	9800	.735	.248	.017	.000	5.7057+04	4.9139+04
3260	.910	.077	.013	.000	1.0282+06	7.9900+01	9900	.739	.244	.016	.000	5.6282+04	5.8322+04
3280	.911	.076	.013	.000	1.0367+06	7.8031+01	10000	.743	.241	.016	.000	5.5523+04	7.8208+04
3300	.912	.075	.013	.000	1.0452+06	7.6222+01	10100	.747	.237	.016	.000	5.4778+04	7.5496+04
3320	.913	.075	.012	.000	1.0534+06	7.4472+01	10200	.751	.234	.015	.000	5.4045+04	4.9659+04
3340	.914	.074	.012	.000	1.0616+06	7.2777+01	10300	.755	.230	.015	.000	5.3329+04	3.3388+04
3360	.914	.074	.012	.000	1.0697+06	7.1136+01	10400	.759	.227	.014	.000	5.2627+04	2.4471+04
3380	.915	.073	.012	.000	1.0776+06	6.9547+01	10500	.762	.224	.014	.000	5.1938+04	2.2506+04
3400	.916	.073	.012	.000	1.0854+06	6.8006+01	10600	.766	.221	.014	.000	5.1263+04	2.7991+04
3420	.917	.072	.011	.000	1.0931+06	6.6514+01	10700	.769	.218	.013	.000	5.0601+04	4.5546+04
3440	.917	.071	.011	.000	1.1006+06	6.5067+01	10800	.773	.214	.013	.000	4.9952+04	7.8384+04
3460	.918	.071	.011	.000	1.1081+06	6.3663+01	10900	.776	.211	.013	.000	4.9315+04	4.9115+04
3480	.919	.070	.011	.000	1.1154+06	6.2302+01	11000	.779	.208	.012	.000	4.8691+04	7.2081+04
3500	.919	.070	.011	.000	1.1227+06	6.0981+01	11100	.782	.205	.012	.000	4.8108+04	6.8234+04
3520	.920	.069	.011	.000	1.1301+06	5.9699+01	11200	.785	.203	.012	.000	4.7510+04	3.6049+04
3540	.920	.069	.011	.000	1.1371+06	5.8455+01	11300	.788	.200	.012	.000	4.6924+04	1.9487+04
3560	.921	.068	.011	.000	1.1440+06	5.7246+01	11400	.793	.195	.012	.000	4.6788+04	1.1807+04
3580	.922	.068	.010	.000	1.1509+06	5.6073+01	11500	.796	.193	.011	.000	4.6219+04	8.0441+03
5100	.651	.314	.035	.000	1.8225+05	2.0338+04	11600	.799	.190	.011	.000	4.5660+04	6.0902+03
5200	.659	.308	.033	.000	1.8100+05	9.4399+03	11700	.802	.187	.011	.000	4.5111+04	5.0720+03
5300	.667	.301	.032	.000	1.7969+05	5.6473+03	11800	.804	.185	.011	.000	4.4573+04	4.6211+03
5400	.674	.295	.031	.000	1.7829+05	3.9427+03	11900	.807	.183	.010	.000	4.4044+04	4.6064+03
5500	.681	.289	.030	.000	1.7683+05	3.0792+03	12000	.810	.180	.010	.000	4.3524+04	5.0191+03
5600	.688	.283	.028	.000	1.7531+05	2.6461+03	12100	.812	.178	.010	.000	4.3014+04	5.9876+03
5700	.695	.278	.027	.000	1.7375+05	2.4941+03	12200	.815	.176	.010	.000	4.2513+04	7.8652+03
5800	.701	.272	.026	.000	1.7216+05	2.5890+03	12300	.817	.173	.010	.000	4.2021+04	1.1450+04
5900	.708	.267	.025	.000	1.7054+05	2.9824+03	12400	.819	.171	.009	.000	4.1538+04	1.8797+04
6000	.714	.261	.025	.000	1.6889+05	3.8504+03	12500	.822	.169	.009	.000	4.1063+04	3.5852+04
6100	.720	.256	.024	.000	1.6722+05	5.6557+03	12600	.824	.167	.009	.000	4.0597+04	8.2017+04
6200	.726	.251	.023	.000	1.6552+05	9.7279+03	12700	.826	.165	.009	.000	4.0139+04	2.2077+05
6300	.731	.246	.022	.000	1.6382+05	2.0923+04	12800	.828	.163	.009	.000	3.9690+04	1.7906+05
6400	.737	.242	.022	.000	1.6210+05	6.7211+04	12900	.830	.161	.009	.000	3.9248+04	3.0845+05
6500	.742	.237	.021	.000	1.6038+05	6.8416+05	13000	.832	.159	.009	.000	3.8814+04	1.1574+05
6600	.747	.232	.020	.000	1.5864+05	4.0780+06	13100	.834	.157	.008	.000	3.8388+04	4.6956+04
6700	.753	.228	.020	.000	1.5691+05	1.0203+05	13200	.836	.156	.008	.000	3.7970+04	2.2827+04
6800	.757	.223	.019	.000	1.5518+05	2.6611+04	13300	.838	.154	.008	.000	3.7559+04	1.2837+04
6900	.762	.219	.019	.000	1.5346+05	1.1228+04	13400	.840	.152	.008	.000	3.7155+04	8.0694+03
7000	.767	.215	.018	.000	1.5173+05	5.9658+03	13500	.841	.151	.008	.000	3.6759+04	5.4821+03
7100	.772	.211	.018	.000	1.5000+05	3.6350+03	13600	.843	.149	.008	.000	3.6369+04	3.9471+03
7200	.776	.207	.017	.000	1.4828+05	2.4262+03	13700	.845	.148	.008	.000	3.5987+04	2.9776+03
7300	.780	.203	.017	.000	1.4657+05	1.7281+03	13800	.846	.146	.008	.000	3.5611+04	2.3275+03
7400	.785	.199	.016	.000	1.4487+05	1.2923+03	13900	.848	.145	.007	.000	3.5241+04	1.8724+03
7500	.789	.195	.016	.000	1.4319+05	1.0034+03	14000	.850	.143	.007	.000	3.4879+04	1.5439+03
7600	.793	.192	.015	.000	1.4152+05	8.0258+02	14100	.851	.142	.007	.000	3.4531+04	1.2986+03
7700	.797	.188	.015	.000	1.3985+05	6.5761+02	14200	.852	.140	.007	.000	3.4179+04	1.1112+03
7800	.801	.185	.014	.000	1.3821+05	5.4958+02	14300	.854	.139	.007	.000	3.3834+04	9.6507+02
7900	.805	.181	.014	.000	1.3658+05	4.6690+02	14400	.855	.138	.007	.000	3.3495+04	8.4889+02
8000	.808	.178	.014	.000	1.3502+05	4.0218+02	14500	.856	.137	.007	.000	3.3161+04	7.5473+02
8100	.812	.175	.013	.000	1.3342+05	3.5052+02	14600	.857	.136	.007	.000	3.2833+04	1.7907+03
8200	.815	.172	.013	.000	1.3183+05	3.0859+02	14700	.858	.135	.007	.000	3.2480+04	1.8055+03
8300	.819	.168	.013	.000	1.3037+05	1.2643+04	14800	.860	.134	.007	.000	3.2132+04	1.8369+03
8400	.822	.165	.012	.000	1.2893+05	1.5291+04	14900	.861	.133	.007	.000	3.1791+04	1.8826+03
8500	.826	.162	.012	.000	1.2750+05	1.8337+04	15000	.862	.132	.007	.000	3.1455+04	1.9418+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=12500$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.0003+02	0.0000	1700	.818	.137	.045	.000	2.7745+05	4.2709+03
420	1.000	.000	.000	.000	3.5521+02	0.0000	1720	.821	.136	.044	.000	2.9188+05	3.8834+03
440	1.000	.000	.000	.000	1.1190+03	0.0000	1740	.824	.134	.043	.000	3.0662+05	3.5439+03
460	1.000	.000	.000	.000	3.1768+03	0.0000	1760	.826	.132	.042	.000	3.2165+05	3.2449+03
480	1.000	.000	.000	.000	8.2363+03	0.0000	1780	.829	.130	.041	.000	3.3697+05	2.9804+03
500	1.000	.000	.000	.000	1.9717+04	0.0000	1800	.832	.128	.040	.000	3.5256+05	2.7454+03
520	1.000	.000	.000	.000	4.3989+04	0.0000	1820	.834	.127	.039	.000	3.6840+05	2.5357+03
540	1.000	.000	.000	.000	9.2200+04	0.0000	1840	.837	.125	.038	.000	3.8442+05	2.3481+03
560	1.000	.000	.000	.000	1.8278+05	0.0000	1860	.839	.123	.037	.000	4.0066+05	2.1795+03
580	1.000	.000	.000	.000	3.4475+05	0.0000	1880	.842	.122	.036	.000	4.1712+05	2.0275+03
600	1.000	.000	.000	.000	6.2178+05	0.0000	1900	.844	.120	.036	.000	4.3378+05	1.8900+03
620	1.000	.000	.000	.000	1.0771+06	0.0000	1920	.846	.119	.035	.000	4.5064+05	1.7654+03
640	1.000	.000	.000	.000	1.7990+06	0.0000	1940	.849	.117	.034	.000	4.6768+05	1.6521+03
660	1.000	.000	.000	.000	2.9068+06	0.0000	1960	.851	.116	.033	.000	4.8489+05	1.5488+03
680	1.000	.000	.000	.000	4.5574+06	0.0000	1980	.853	.115	.032	.000	5.0226+05	1.4544+03
700	1.000	.000	.000	.000	6.9517+06	0.0000	2000	.855	.113	.032	.000	5.1978+05	1.3679+03
720	1.000	.000	.000	.000	1.0340+07	0.0000	2020	.857	.112	.031	.000	5.3753+05	1.2885+03
740	1.000	.000	.000	.000	1.4995+07	0.0000	2040	.859	.111	.030	.000	5.5541+05	1.2155+03
760	1.000	.000	.000	.000	2.1244+07	0.0000	2060	.861	.109	.030	.000	5.7340+05	1.1482+03
780	1.000	.000	.000	.000	2.9517+07	0.0000	2080	.863	.108	.029	.000	5.9150+05	1.0860+03
800	1.000	.000	.000	.000	4.0282+07	0.0000	2100	.865	.107	.029	.000	6.0970+05	1.0285+03
820	1.000	.000	.000	.000	5.4068+07	0.0000	2120	.866	.105	.028	.000	6.2798+05	9.7515+02
840	1.000	.000	.000	.000	7.1431+07	0.0000	2140	.868	.104	.028	.000	6.4633+05	9.2565+02
860	1.000	.000	.000	.000	9.3028+07	0.0000	2160	.870	.103	.027	.000	6.6474+05	8.7961+02
880	1.000	.000	.000	.000	1.1956+08	0.0000	2180	.871	.102	.027	.000	6.8320+05	8.3674+02
900	1.000	.000	.000	.000	1.5174+08	0.0000	2200	.873	.101	.026	.000	7.0170+05	7.9676+02
920	.655	.295	.050	.000	3.9976+03	6.6253+05	2220	.875	.100	.026	.000	7.2024+05	7.5942+02
940	.657	.286	.057	.000	4.9712+03	1.0437+07	2240	.876	.099	.025	.000	7.3879+05	7.2450+02
960	.659	.277	.064	.000	6.1238+03	1.3920+07	2260	.878	.098	.025	.000	7.5736+05	6.9180+02
980	.661	.268	.071	.000	7.4748+03	2.3101+07	2280	.879	.097	.024	.000	7.7593+05	6.6114+02
1000	.663	.260	.077	.000	9.0453+03	2.3319+06	2300	.881	.096	.024	.000	7.9450+05	6.3236+02
1020	.664	.252	.084	.000	1.0856+04	6.9700+07	2320	.882	.095	.023	.000	8.1304+05	6.0531+02
1040	.666	.245	.090	.000	1.2926+04	6.7401+06	2340	.884	.094	.023	.000	8.3157+05	5.7987+02
1060	.667	.238	.095	.000	1.5274+04	8.3895+05	2360	.885	.093	.022	.000	8.5007+05	5.5590+02
1080	.669	.231	.100	.000	1.7916+04	3.4805+05	2380	.886	.092	.022	.000	8.6852+05	5.3331+02
1100	.672	.225	.104	.000	2.0867+04	2.4841+05	2400	.888	.091	.021	.000	8.8693+05	5.1199+02
1120	.674	.219	.107	.000	2.4137+04	2.6306+05	2420	.889	.090	.021	.000	9.0529+05	4.9184+02
1140	.677	.214	.109	.000	2.7737+04	3.8354+05	2440	.890	.089	.021	.000	9.2359+05	4.7280+02
1160	.681	.209	.110	.000	3.1674+04	7.5581+05	2460	.892	.088	.020	.000	9.4182+05	4.5478+02
1180	.685	.205	.110	.000	3.5954+04	2.2435+06	2480	.893	.087	.020	.000	9.5998+05	4.3771+02
1200	.690	.200	.110	.000	4.0578+04	1.7517+07	2500	.894	.086	.020	.000	9.7805+05	4.2152+02
1220	.695	.197	.109	.000	4.5551+04	4.1468+08	2520	.896	.085	.019	.000	9.9604+05	4.0617+02
1240	.700	.193	.107	.000	5.0872+04	5.8298+06	2540	.897	.085	.019	.000	1.0138+06	3.9159+02
1260	.706	.190	.104	.000	5.6542+04	1.2911+06	2560	.898	.084	.018	.000	1.0314+06	3.7773+02
1280	.713	.187	.101	.000	6.2563+04	5.0952+05	2580	.899	.083	.018	.000	1.0489+06	3.6456+02
1300	.719	.184	.097	.000	6.8934+04	2.6155+05	2600	.900	.082	.018	.000	1.0663+06	3.5202+02
1320	.726	.181	.093	.000	7.5650+04	1.5604+05	2620	.901	.081	.017	.000	1.0836+06	3.4008+02
1340	.733	.178	.089	.000	8.2706+04	1.0251+05	2640	.902	.081	.017	.000	1.1008+06	3.2870+02
1360	.740	.176	.084	.000	9.0114+04	7.1989+04	2660	.903	.080	.017	.000	1.1178+06	3.1785+02
1380	.747	.174	.079	.000	9.7877+04	5.3060+04	2680	.904	.079	.017	.000	1.1347+06	3.0750+02
1400	.754	.171	.075	.000	1.0600+05	4.0566+04	2700	.905	.078	.016	.000	1.1515+06	2.9761+02
1420	.761	.169	.070	.000	1.1448+05	3.1913+04	2720	.906	.078	.016	.000	1.1682+06	2.8817+02
1440	.768	.167	.066	.000	1.2333+05	2.5687+04	2740	.907	.077	.016	.000	1.1847+06	2.7914+02
1460	.774	.165	.061	.000	1.3255+05	2.1067+04	2760	.908	.076	.016	.000	1.2013+06	2.7050+02
1480	.780	.163	.057	.000	1.4214+05	1.7550+04	2780	.909	.076	.015	.000	1.2175+06	2.6224+02
1500	.787	.160	.053	.000	1.5211+05	1.4815+04	2800	.910	.075	.015	.000	1.2336+06	2.5432+02
1520	.790	.158	.052	.000	1.6295+05	1.2650+04	2820	.911	.074	.015	.000	1.2495+06	2.4674+02
1540	.793	.155	.051	.000	1.7419+05	1.0909+04	2840	.912	.073	.015	.000	1.2652+06	2.3947+02
1560	.797	.153	.051	.000	1.8582+05	9.4895+03	2860	.913	.073	.014	.000	1.2808+06	2.3249+02
1580	.800	.150	.050	.000	1.9783+05	8.3187+03	2880	.914	.072	.014	.000	1.2962+06	2.2580+02
1600	.803	.148	.049	.000	2.1022+05	7.3427+03	2900	.915	.072	.014	.000	1.3115+06	2.1938+02
1620	.806	.146	.048	.000	2.2297+05	6.5215+03	2920	.915	.071	.014	.000	1.3266+06	2.1321+02
1640	.809	.144	.047	.000	2.3608+05	5.8246+03	2940	.916	.070	.013	.000	1.3415+06	2.0728+02
1660	.812	.142	.046	.000	2.4954+05	5.2287+03	2960	.917	.070	.013	.000	1.3563+06	2.0158+02
1680	.815	.139	.045	.000	2.6333+05	4.7156+03	2980	.918	.069	.013	.000	1.3709+06	1.9610+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T = 12500$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.919	.068	.013	.000	1.3853+06	1.9082+02	8600	.867	.123	.009	.000	1.8598+05	3.0039+04
3020	.919	.068	.013	.000	1.3995+06	1.8574+02	8700	.753	.230	.017	.000	9.6936+04	3.3666+04
3040	.920	.067	.012	.000	1.4136+06	1.8085+02	8800	.757	.226	.017	.000	9.5641+04	4.0936+04
3060	.921	.067	.012	.000	1.4274+06	1.7614+02	8900	.761	.223	.016	.000	9.4370+04	4.4895+04
3080	.922	.066	.012	.000	1.4411+06	1.7160+02	9000	.765	.219	.016	.000	9.3117+04	4.9613+04
3100	.923	.066	.012	.000	1.4547+06	1.6722+02	9100	.769	.216	.015	.000	9.1887+04	5.8547+04
3120	.923	.065	.012	.000	1.4680+06	1.6300+02	9200	.772	.213	.015	.000	9.0678+04	5.6744+04
3140	.924	.065	.011	.000	1.4812+06	1.5892+02	9300	.776	.209	.015	.000	8.9491+04	7.0612+04
3160	.925	.064	.011	.000	1.4941+06	1.5499+02	9400	.780	.206	.014	.000	8.8326+04	7.2529+04
3180	.925	.063	.011	.000	1.5068+06	1.5119+02	9500	.783	.203	.014	.000	8.7181+04	7.2025+04
3200	.926	.063	.011	.000	1.5193+06	1.4752+02	9600	.787	.200	.014	.000	8.6058+04	7.0373+04
3220	.927	.062	.011	.000	1.5316+06	1.4397+02	9700	.790	.197	.013	.000	8.4954+04	7.2605+04
3240	.927	.062	.011	.000	1.5437+06	1.4055+02	9800	.793	.194	.013	.000	8.3870+04	7.5892+04
3260	.928	.061	.010	.000	1.5557+06	1.3723+02	9900	.796	.191	.013	.000	8.2806+04	8.6595+04
3280	.929	.061	.010	.000	1.5675+06	1.3403+02	10000	.800	.188	.012	.000	8.1761+04	1.0548+05
3300	.929	.060	.010	.000	1.5791+06	1.3093+02	10100	.803	.185	.012	.000	8.0734+04	1.0165+05
3320	.930	.060	.010	.000	1.5905+06	1.2793+02	10200	.806	.182	.012	.000	7.9723+04	7.3953+04
3340	.931	.060	.010	.000	1.6017+06	1.2502+02	10300	.809	.180	.012	.000	7.8733+04	5.4157+04
3360	.931	.059	.010	.000	1.6128+06	1.2221+02	10400	.812	.177	.011	.000	7.7761+04	4.2733+04
3380	.932	.059	.010	.000	1.6237+06	1.1948+02	10500	.815	.174	.011	.000	7.6806+04	4.0557+04
3400	.932	.058	.009	.000	1.6344+06	1.1684+02	10600	.817	.172	.011	.000	7.5868+04	4.9547+04
3420	.933	.058	.009	.000	1.6448+06	1.1428+02	10700	.820	.169	.010	.000	7.4947+04	7.4420+04
3440	.934	.057	.009	.000	1.6551+06	1.1180+02	10800	.823	.167	.010	.000	7.4042+04	1.0894+05
3460	.934	.057	.009	.000	1.6653+06	1.0939+02	10900	.826	.165	.010	.000	7.3153+04	5.5624+04
3480	.935	.056	.009	.000	1.6752+06	1.0705+02	11000	.828	.162	.009	.000	7.2280+04	8.4857+04
3500	.935	.056	.009	.000	1.6850+06	1.0479+02	11100	.830	.160	.010	.000	7.1456+04	9.8534+04
3520	.936	.055	.009	.000	1.6950+06	1.0259+02	11200	.833	.158	.009	.000	7.0617+04	5.9838+04
3540	.936	.055	.009	.000	1.7045+06	1.0045+02	11300	.835	.156	.009	.000	6.9793+04	3.4718+04
3560	.937	.055	.009	.000	1.7139+06	9.8381+01	11400	.839	.152	.009	.000	6.9728+04	2.1729+04
3580	.937	.054	.009	.000	1.7231+06	9.6367+01	11500	.841	.150	.009	.000	6.8923+04	1.5000+04
5100	.720	.252	.028	.000	2.6393+05	3.7527+04	11600	.844	.148	.009	.000	6.8132+04	1.1393+04
5200	.727	.246	.027	.000	2.6231+05	1.7348+04	11700	.846	.146	.008	.000	6.7353+04	9.4944+03
5300	.733	.241	.026	.000	2.6061+05	1.0337+04	11800	.848	.144	.008	.000	6.6587+04	8.6490+03
5400	.740	.235	.025	.000	2.5877+05	7.1903+03	11900	.850	.142	.008	.000	6.5833+04	8.6116+03
5500	.746	.230	.024	.000	2.5681+05	5.5980+03	12000	.852	.140	.008	.000	6.5092+04	9.3910+03
5600	.752	.225	.023	.000	2.5478+05	4.7981+03	12100	.854	.138	.008	.000	6.4363+04	1.1240+04
5700	.758	.220	.022	.000	2.5269+05	4.5133+03	12200	.856	.137	.008	.000	6.3645+04	1.4729+04
5800	.763	.215	.021	.000	2.5054+05	4.6781+03	12300	.858	.135	.007	.000	6.2940+04	2.1416+04
5900	.769	.211	.021	.000	2.4833+05	5.3835+03	12400	.859	.133	.007	.000	6.2246+04	3.4933+04
6000	.774	.206	.020	.000	2.4609+05	6.9465+03	12500	.861	.132	.007	.000	6.1564+04	6.4873+04
6100	.779	.202	.019	.000	2.4380+05	1.0199+04	12600	.863	.130	.007	.000	6.0893+04	1.3962+05
6200	.784	.198	.019	.000	2.4147+05	1.7537+04	12700	.864	.129	.007	.000	6.0232+04	3.2890+05
6300	.788	.194	.018	.000	2.3912+05	3.7695+04	12800	.866	.127	.007	.000	5.9582+04	1.8563+05
6400	.793	.190	.017	.000	2.3674+05	1.2097+05	12900	.868	.126	.007	.000	5.8943+04	4.2420+05
6500	.797	.186	.017	.000	2.3435+05	2.3114+06	13000	.869	.124	.007	.000	5.8315+04	1.8963+05
6600	.802	.182	.016	.000	2.3195+05	6.9273+06	13100	.871	.123	.006	.000	5.7696+04	8.3581+04
6700	.806	.178	.016	.000	2.2954+05	1.8357+05	13200	.872	.122	.006	.000	5.7088+04	4.2099+04
6800	.810	.175	.015	.000	2.2713+05	4.7932+04	13300	.873	.120	.006	.000	5.6490+04	2.3999+04
6900	.814	.171	.015	.000	2.2471+05	2.0236+04	13400	.875	.119	.006	.000	5.5902+04	1.5120+04
7000	.818	.168	.014	.000	2.2229+05	1.0755+04	13500	.876	.118	.006	.000	5.5323+04	1.0286+04
7100	.821	.165	.014	.000	2.1987+05	6.5526+03	13600	.877	.117	.006	.000	5.4754+04	7.4031+03
7200	.825	.161	.014	.000	2.1745+05	4.3724+03	13700	.879	.116	.006	.000	5.4194+04	5.5670+03
7300	.829	.158	.013	.000	2.1505+05	3.1132+03	13800	.880	.114	.006	.000	5.3643+04	4.3482+03
7400	.832	.155	.013	.000	2.1265+05	2.3269+03	13900	.881	.113	.006	.000	5.3101+04	3.4961+03
7500	.835	.152	.012	.000	2.1027+05	1.8057+03	14000	.882	.112	.006	.000	5.2568+04	2.8756+03
7600	.839	.149	.012	.000	2.0791+05	1.4435+03	14100	.883	.111	.006	.000	5.2053+04	2.4142+03
7700	.842	.146	.012	.000	2.0555+05	1.1820+03	14200	.884	.110	.006	.000	5.1536+04	2.0632+03
7800	.845	.144	.011	.000	2.0322+05	9.8725+02	14300	.885	.109	.006	.000	5.1027+04	1.7895+03
7900	.848	.141	.011	.000	2.0091+05	8.3823+02	14400	.886	.108	.005	.000	5.0526+04	1.5727+03
8000	.851	.138	.011	.000	1.9871+05	7.2162+02	14500	.887	.107	.005	.000	5.0033+04	1.3986+03
8100	.854	.136	.010	.000	1.9643+05	6.2858+02	14600	.888	.107	.005	.000	4.9546+04	2.7597+03
8200	.857	.133	.010	.000	1.9416+05	5.5309+02	14700	.889	.106	.005	.000	4.9022+04	2.7450+03
8300	.859	.131	.010	.000	1.9208+05	1.7733+04	14800	.890	.105	.005	.000	4.8506+04	2.7572+03
8400	.862	.128	.010	.000	1.9003+05	2.1241+04	14900	.890	.105	.005	.000	4.7999+04	2.7924+03
8500	.865	.126	.009	.000	1.8799+05	2.5436+04	15000	.891	.104	.005	.000	4.7500+04	2.8489+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=13000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	2.6430+02	0.0000	1700	.852	.112	.036	.000	4.3850+05	6.7096+03
420	1.000	.000	.000	.000	8.9038+02	0.0000	1720	.854	.111	.035	.000	4.6023+05	6.1035+03
440	1.000	.000	.000	.000	2.6736+03	0.0000	1740	.856	.109	.035	.000	4.8236+05	5.5722+03
460	1.000	.000	.000	.000	7.2657+03	0.0000	1760	.859	.108	.034	.000	5.0488+05	5.1041+03
480	1.000	.000	.000	.000	1.8097+04	0.0000	1780	.861	.106	.033	.000	5.2776+05	4.6897+03
500	1.000	.000	.000	.000	4.1752+04	0.0000	1800	.863	.105	.032	.000	5.5099+05	4.3215+03
520	1.000	.000	.000	.000	9.0033+04	0.0000	1820	.865	.103	.032	.000	5.7455+05	3.9928+03
540	1.000	.000	.000	.000	1.8285+05	0.0000	1840	.867	.102	.031	.000	5.9832+05	3.6985+03
560	1.000	.000	.000	.000	3.5203+05	0.0000	1860	.869	.100	.030	.000	6.2235+05	3.4339+03
580	1.000	.000	.000	.000	6.4611+05	0.0000	1880	.871	.099	.029	.000	6.4665+05	3.1953+03
600	1.000	.000	.000	.000	1.1360+06	0.0000	1900	.873	.098	.029	.000	6.7119+05	2.9796+03
620	1.000	.000	.000	.000	1.9216+06	0.0000	1920	.875	.097	.028	.000	6.9597+05	2.7838+03
640	1.000	.000	.000	.000	3.1387+06	0.0000	1940	.877	.095	.027	.000	7.2096+05	2.6058+03
660	1.000	.000	.000	.000	4.9663+06	0.0000	1960	.879	.094	.027	.000	7.4614+05	2.4434+03
680	1.000	.000	.000	.000	7.6344+06	0.0000	1980	.881	.093	.026	.000	7.7151+05	2.2950+03
700	1.000	.000	.000	.000	1.1431+07	0.0000	2000	.883	.092	.026	.000	7.9704+05	2.1590+03
720	1.000	.000	.000	.000	1.6706+07	0.0000	2020	.884	.091	.025	.000	8.2283+05	2.0342+03
740	1.000	.000	.000	.000	2.3827+07	0.0000	2040	.886	.090	.025	.000	8.4875+05	1.9192+03
760	1.000	.000	.000	.000	3.3229+07	0.0000	2060	.887	.089	.024	.000	8.7478+05	1.8133+03
780	1.000	.000	.000	.000	4.5486+07	0.0000	2080	.889	.087	.024	.000	9.0092+05	1.7154+03
800	1.000	.000	.000	.000	6.1201+07	0.0000	2100	.890	.086	.023	.000	9.2714+05	1.6248+03
820	1.000	.000	.000	.000	8.1044+07	0.0000	2120	.892	.085	.023	.000	9.5343+05	1.5408+03
840	1.000	.000	.000	.000	1.0570+08	0.0000	2140	.893	.084	.022	.000	9.7977+05	1.4629+03
860	1.000	.000	.000	.000	1.3599+08	0.0000	2160	.895	.083	.022	.000	1.0061+06	1.3903+03
880	1.000	.000	.000	.000	1.7273+08	0.0000	2180	.896	.083	.021	.000	1.0325+06	1.3228+03
900	1.000	.000	.000	.000	2.1679+08	0.0000	2200	.897	.082	.021	.000	1.0590+06	1.2598+03
920	.708	.250	.042	.000	7.5825+03	1.1452+06	2220	.899	.081	.021	.000	1.0854+06	1.2009+03
940	.710	.242	.048	.000	9.3371+03	1.9303+07	2240	.900	.080	.020	.000	1.1118+06	1.1458+03
960	.713	.234	.053	.000	1.1393+04	2.5216+07	2260	.901	.079	.020	.000	1.1381+06	1.0943+03
980	.714	.227	.059	.000	1.3778+04	4.1651+07	2280	.902	.078	.019	.000	1.1644+06	1.0459+03
1000	.716	.220	.064	.000	1.6525+04	3.9143+06	2300	.904	.077	.019	.000	1.1907+06	1.0005+03
1020	.718	.213	.069	.000	1.9662+04	1.1741+08	2320	.905	.076	.019	.000	1.2169+06	9.5782+02
1040	.719	.207	.074	.000	2.3219+04	1.1239+07	2340	.906	.076	.018	.000	1.2430+06	9.1767+02
1060	.721	.201	.078	.000	2.7220+04	1.3871+06	2360	.907	.075	.018	.000	1.2690+06	8.7985+02
1080	.723	.195	.082	.000	3.1688+04	5.6903+05	2380	.908	.074	.018	.000	1.2949+06	8.4418+02
1100	.725	.190	.085	.000	3.6643+04	3.9961+05	2400	.909	.073	.017	.000	1.3208+06	8.1052+02
1120	.728	.185	.087	.000	4.2101+04	4.1632+05	2420	.911	.072	.017	.000	1.3464+06	7.7872+02
1140	.730	.181	.089	.000	4.8075+04	6.0034+05	2440	.912	.072	.017	.000	1.3720+06	7.4864+02
1160	.734	.177	.090	.000	5.4575+04	1.1766+06	2460	.913	.071	.016	.000	1.3975+06	7.2018+02
1180	.738	.173	.090	.000	6.1606+04	3.4844+06	2480	.914	.070	.016	.000	1.4227+06	6.9321+02
1200	.742	.169	.089	.000	6.9174+04	2.7146+07	2500	.915	.069	.016	.000	1.4479+06	6.6764+02
1220	.746	.165	.088	.000	7.7281+04	6.4149+08	2520	.916	.069	.015	.000	1.4729+06	6.4338+02
1240	.751	.162	.087	.000	8.5927+04	9.0437+06	2540	.917	.068	.015	.000	1.4975+06	6.2035+02
1260	.756	.159	.084	.000	9.5112+04	2.0048+06	2560	.918	.067	.015	.000	1.5218+06	5.9845+02
1280	.762	.156	.082	.000	1.0484+05	7.9121+05	2580	.919	.067	.015	.000	1.5460+06	5.7763+02
1300	.768	.154	.079	.000	1.1510+05	4.0610+05	2600	.919	.066	.014	.000	1.5700+06	5.5781+02
1320	.774	.151	.075	.000	1.2589+05	2.4226+05	2620	.920	.065	.014	.000	1.5938+06	5.3894+02
1340	.779	.149	.072	.000	1.3720+05	1.5919+05	2640	.921	.065	.014	.000	1.6173+06	5.2095+02
1360	.785	.146	.068	.000	1.4904+05	1.1183+05	2660	.922	.064	.014	.000	1.6407+06	5.0379+02
1380	.791	.144	.064	.000	1.6142+05	8.2465+04	2680	.923	.064	.013	.000	1.6639+06	4.8742+02
1400	.797	.142	.061	.000	1.7434+05	6.3088+04	2700	.924	.063	.013	.000	1.6868+06	4.7178+02
1420	.803	.140	.057	.000	1.8779+05	4.9667+04	2720	.925	.062	.013	.000	1.7095+06	4.5684+02
1440	.809	.138	.053	.000	2.0179+05	4.0008+04	2740	.925	.062	.013	.000	1.7320+06	4.4256+02
1460	.814	.136	.050	.000	2.1633+05	3.2838+04	2760	.926	.061	.013	.000	1.7546+06	4.2889+02
1480	.820	.134	.046	.000	2.3141+05	2.7378+04	2780	.927	.061	.012	.000	1.7766+06	4.1582+02
1500	.825	.132	.043	.000	2.4704+05	2.3131+04	2800	.928	.060	.012	.000	1.7984+06	4.0329+02
1520	.828	.130	.042	.000	2.6384+05	1.9765+04	2820	.928	.060	.012	.000	1.8199+06	3.9129+02
1540	.831	.128	.042	.000	2.8119+05	1.7057+04	2840	.929	.059	.012	.000	1.8412+06	3.7979+02
1560	.833	.126	.041	.000	2.9910+05	1.4849+04	2860	.930	.059	.012	.000	1.8622+06	3.6875+02
1580	.836	.123	.040	.000	3.1753+05	1.3025+04	2880	.930	.058	.011	.000	1.8830+06	3.5816+02
1600	.839	.121	.040	.000	3.3649+05	1.1505+04	2900	.931	.058	.011	.000	1.9035+06	3.4799+02
1620	.842	.120	.039	.000	3.5595+05	1.0224+04	2920	.932	.057	.011	.000	1.9238+06	3.3822+02
1640	.844	.118	.038	.000	3.7590+05	9.1366+03	2940	.933	.056	.011	.000	1.9438+06	3.2884+02
1660	.847	.116	.037	.000	3.9632+05	8.2062+03	2960	.933	.056	.011	.000	1.9636+06	3.1981+02
1680	.849	.114	.037	.000	4.1719+05	7.4046+03	2980	.934	.056	.011	.000	1.9831+06	3.1113+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=13000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.935	.055	.010	.000	2.0023+06	3.0278+02	8600	.897	.096	.007	.000	2.6199+05	4.1907+04
3020	.935	.055	.010	.000	2.0213+06	2.9473+02	8700	.808	.179	.013	.000	1.3603+05	4.6585+04
3040	.936	.054	.010	.000	2.0400+06	2.8699+02	8800	.811	.176	.013	.000	1.3431+05	5.5503+04
3060	.936	.054	.010	.000	2.0584+06	2.7953+02	8900	.814	.173	.013	.000	1.3263+05	5.9964+04
3080	.937	.053	.010	.000	2.0766+06	2.7233+02	9000	.817	.170	.012	.000	1.3097+05	6.6417+04
3100	.938	.053	.010	.000	2.0945+06	2.6540+02	9100	.820	.168	.012	.000	1.2933+05	7.9101+04
3120	.938	.052	.009	.000	2.1121+06	2.5871+02	9200	.823	.165	.012	.000	1.2772+05	7.5076+04
3140	.939	.052	.009	.000	2.1295+06	2.5225+02	9300	.826	.162	.012	.000	1.2614+05	9.4830+04
3160	.939	.051	.009	.000	2.1465+06	2.4602+02	9400	.829	.160	.011	.000	1.2458+05	9.7654+04
3180	.940	.051	.009	.000	2.1631+06	2.4000+02	9500	.832	.157	.011	.000	1.2305+05	9.9247+04
3200	.941	.051	.009	.000	2.1795+06	2.3418+02	9600	.834	.155	.011	.000	1.2154+05	9.8811+04
3220	.941	.050	.009	.000	2.1957+06	2.2857+02	9700	.837	.152	.010	.000	1.2006+05	1.0276+05
3240	.942	.050	.009	.000	2.2116+06	2.2313+02	9800	.840	.150	.010	.000	1.1860+05	1.0864+05
3260	.942	.049	.009	.000	2.2272+06	2.1788+02	9900	.842	.148	.010	.000	1.1717+05	1.2115+05
3280	.943	.049	.008	.000	2.2425+06	2.1280+02	10000	.845	.146	.010	.000	1.1576+05	1.3639+05
3300	.943	.049	.008	.000	2.2576+06	2.0789+02	10100	.847	.143	.009	.000	1.1438+05	1.3141+05
3320	.944	.048	.008	.000	2.2724+06	2.0313+02	10200	.850	.141	.009	.000	1.1301+05	1.0447+05
3340	.944	.048	.008	.000	2.2870+06	1.9852+02	10300	.852	.139	.009	.000	1.1167+05	8.1300+04
3360	.945	.047	.008	.000	2.3013+06	1.9406+02	10400	.854	.137	.009	.000	1.1035+05	6.8217+04
3380	.945	.047	.008	.000	2.3153+06	1.8974+02	10500	.856	.135	.008	.000	1.0906+05	6.6528+04
3400	.946	.047	.008	.000	2.3291+06	1.8556+02	10600	.859	.133	.008	.000	1.0778+05	7.9526+04
3420	.946	.046	.008	.000	2.3425+06	1.8150+02	10700	.861	.131	.008	.000	1.0653+05	1.1043+05
3440	.947	.046	.007	.000	2.3558+06	1.7756+02	10800	.863	.129	.008	.000	1.0530+05	1.4093+05
3460	.947	.046	.007	.000	2.3688+06	1.7374+02	10900	.865	.128	.008	.000	1.0409+05	6.2661+04
3480	.948	.045	.007	.000	2.3815+06	1.7004+02	11000	.867	.126	.007	.000	1.0289+05	9.7023+04
3500	.948	.045	.007	.000	2.3940+06	1.6645+02	11100	.869	.124	.007	.000	1.0176+05	1.3097+05
3520	.948	.044	.007	.000	2.4066+06	1.6296+02	11200	.870	.122	.007	.000	1.0061+05	8.9855+04
3540	.949	.044	.007	.000	2.4187+06	1.5957+02	11300	.872	.121	.007	.000	9.9478+04	5.5998+04
3560	.949	.044	.007	.000	2.4306+06	1.5629+02	11400	.876	.118	.007	.000	9.9550+04	3.6427+04
3580	.950	.043	.007	.000	2.4422+06	1.5309+02	11500	.877	.116	.007	.000	9.8441+04	2.5620+04
5100	.778	.199	.023	.000	3.6821+05	6.3845+04	11600	.879	.115	.007	.000	9.7348+04	1.9640+04
5200	.784	.194	.022	.000	3.6612+05	2.9509+04	11700	.881	.113	.006	.000	9.6272+04	1.6411+04
5300	.789	.190	.021	.000	3.6391+05	1.7574+04	11800	.882	.112	.006	.000	9.5212+04	1.4964+04
5400	.795	.185	.020	.000	3.6149+05	1.2214+04	11900	.884	.110	.006	.000	9.4167+04	1.4913+04
5500	.800	.181	.019	.000	3.5891+05	9.4965+03	12000	.885	.109	.006	.000	9.3138+04	1.6248+04
5600	.805	.177	.019	.000	3.5621+05	8.1222+03	12100	.887	.107	.006	.000	9.2125+04	1.9358+04
5700	.809	.173	.018	.000	3.5342+05	7.6181+03	12200	.888	.106	.006	.000	9.1127+04	2.5386+04
5800	.814	.169	.017	.000	3.5054+05	7.8689+03	12300	.889	.105	.006	.000	9.0145+04	3.6690+04
5900	.818	.165	.016	.000	3.4758+05	9.0220+03	12400	.891	.104	.006	.000	8.9177+04	5.8908+04
6000	.823	.161	.016	.000	3.4456+05	1.1601+04	12500	.892	.102	.005	.000	8.8224+04	1.0639+05
6100	.827	.158	.015	.000	3.4147+05	1.6983+04	12600	.893	.101	.005	.000	8.7286+04	2.1527+05
6200	.831	.154	.015	.000	3.3831+05	2.9133+04	12700	.895	.100	.005	.000	8.6362+04	4.5066+05
6300	.835	.151	.014	.000	3.3511+05	6.2508+04	12800	.896	.099	.005	.000	8.5451+04	1.8762+05
6400	.838	.148	.014	.000	3.3188+05	2.0028+05	12900	.897	.098	.005	.000	8.4555+04	5.4249+05
6500	.842	.145	.013	.000	3.2863+05	3.6575+06	13000	.898	.097	.005	.000	8.3673+04	2.8254+05
6600	.845	.142	.013	.000	3.2535+05	1.1320+07	13100	.899	.096	.005	.000	8.2804+04	1.3457+05
6700	.849	.139	.013	.000	3.2206+05	3.0377+05	13200	.900	.095	.005	.000	8.1948+04	7.0449+04
6800	.852	.136	.012	.000	3.1876+05	7.9430+04	13300	.901	.094	.005	.000	8.1106+04	4.0907+04
6900	.855	.133	.012	.000	3.1545+05	3.3571+04	13400	.902	.093	.005	.000	8.0277+04	2.5971+04
7000	.858	.130	.011	.000	3.1213+05	1.7859+04	13500	.903	.092	.005	.000	7.9461+04	1.7707+04
7100	.861	.128	.011	.000	3.0881+05	1.0890+04	13600	.904	.091	.004	.000	7.8657+04	1.2762+04
7200	.864	.125	.011	.000	3.0549+05	7.2729+03	13700	.905	.090	.004	.000	7.7865+04	9.6070+03
7300	.867	.123	.010	.000	3.0218+05	5.1823+03	13800	.906	.089	.004	.000	7.7085+04	7.4834+03
7400	.870	.120	.010	.000	2.9888+05	3.8761+03	13900	.907	.089	.004	.000	7.6318+04	6.0210+03
7500	.872	.118	.010	.000	2.9560+05	3.0099+03	14000	.908	.088	.004	.000	7.5562+04	4.9517+03
7600	.875	.116	.010	.000	2.9234+05	2.4077+03	14100	.909	.087	.004	.000	7.4829+04	4.1572+03
7700	.877	.114	.009	.000	2.8909+05	1.9728+03	14200	.909	.086	.004	.000	7.4094+04	3.5496+03
7800	.880	.111	.009	.000	2.8587+05	1.6487+03	14300	.910	.086	.004	.000	7.3371+04	3.0771+03
7900	.882	.109	.009	.000	2.8267+05	1.4006+03	14400	.911	.085	.004	.000	7.2659+04	2.7041+03
8000	.884	.107	.008	.000	2.7965+05	1.2064+03	14500	.912	.084	.004	.000	7.1957+04	2.4040+03
8100	.887	.105	.008	.000	2.7650+05	1.0514+03	14600	.912	.084	.004	.000	7.1262+04	4.4360+03
8200	.889	.103	.008	.000	2.7335+05	9.2561+02	14700	.913	.083	.004	.000	7.0516+04	4.3746+03
8300	.891	.101	.008	.000	2.7047+05	2.6354+04	14800	.913	.083	.004	.000	6.9781+04	4.3564+03
8400	.893	.099	.008	.000	2.6762+05	3.0961+04	14900	.914	.082	.004	.000	6.9058+04	4.3746+03
8500	.895	.097	.007	.000	2.6479+05	3.6404+04	15000	.915	.082	.004	.000	6.8346+04	4.4242+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T = 13500$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	6.3135+02	0.0000	1700	.880	.091	.029	.000	6.5440+05	9.7739+03
420	1.000	.000	.000	.000	2.0256+03	0.0000	1720	.882	.090	.028	.000	6.8529+05	8.8949+03
440	1.000	.000	.000	.000	5.8185+03	0.0000	1740	.884	.089	.028	.000	7.1668+05	8.1239+03
460	1.000	.000	.000	.000	1.5184+04	0.0000	1760	.885	.087	.027	.000	7.4853+05	7.4442+03
480	1.000	.000	.000	.000	3.6441+04	0.0000	1780	.887	.086	.027	.000	7.8082+05	6.8424+03
500	1.000	.000	.000	.000	8.1252+04	0.0000	1800	.889	.085	.026	.000	8.1353+05	6.3073+03
520	1.000	.000	.000	.000	1.6977+05	0.0000	1820	.891	.084	.025	.000	8.4662+05	5.8295+03
540	1.000	.000	.000	.000	3.3487+05	0.0000	1840	.893	.083	.025	.000	8.7992+05	5.4014+03
560	1.000	.000	.000	.000	6.2747+05	0.0000	1860	.894	.081	.024	.000	9.1351+05	5.0165+03
580	1.000	.000	.000	.000	1.1229+06	0.0000	1880	.896	.080	.024	.000	9.4740+05	4.6693+03
600	1.000	.000	.000	.000	1.9285+06	0.0000	1900	.898	.079	.023	.000	9.8155+05	4.3551+03
620	1.000	.000	.000	.000	3.1909+06	0.0000	1920	.899	.078	.023	.000	1.0160+06	4.0701+03
640	1.000	.000	.000	.000	5.1053+06	0.0000	1940	.901	.077	.022	.000	1.0506+06	3.8107+03
660	1.000	.000	.000	.000	7.9229+06	0.0000	1960	.902	.076	.022	.000	1.0854+06	3.5741+03
680	1.000	.000	.000	.000	1.1959+07	0.0000	1980	.904	.075	.021	.000	1.1204+06	3.3577+03
700	1.000	.000	.000	.000	1.7599+07	0.0000	2000	.905	.074	.021	.000	1.1556+06	3.1594+03
720	1.000	.000	.000	.000	2.5308+07	0.0000	2020	.906	.073	.020	.000	1.1910+06	2.9773+03
740	1.000	.000	.000	.000	3.5543+07	0.0000	2040	.908	.072	.020	.000	1.2265+06	2.8096+03
760	1.000	.000	.000	.000	4.8852+07	0.0000	2060	.909	.072	.019	.000	1.2621+06	2.6550+03
780	1.000	.000	.000	.000	6.5952+07	0.0000	2080	.910	.071	.019	.000	1.2978+06	2.5121+03
800	1.000	.000	.000	.000	8.7579+07	0.0000	2100	.912	.070	.019	.000	1.3335+06	2.3799+03
820	1.000	.000	.000	.000	1.1453+08	0.0000	2120	.913	.069	.018	.000	1.3693+06	2.2573+03
840	1.000	.000	.000	.000	1.4761+08	0.0000	2140	.914	.068	.018	.000	1.4050+06	2.1434+03
860	1.000	.000	.000	.000	1.8776+08	0.0000	2160	.915	.067	.018	.000	1.4408+06	2.0374+03
880	1.000	.000	.000	.000	2.3593+08	0.0000	2180	.916	.067	.017	.000	1.4765+06	1.9387+03
900	1.000	.000	.000	.000	2.9306+08	0.0000	2200	.917	.066	.017	.000	1.5121+06	1.8466+03
920	.755	.209	.035	.000	1.3429+04	1.8249+06	2220	.918	.065	.017	.000	1.5477+06	1.7606+03
940	.758	.202	.040	.000	1.6388+04	3.2851+07	2240	.919	.064	.016	.000	1.5832+06	1.6801+03
960	.760	.196	.044	.000	1.9823+04	4.2093+07	2260	.920	.064	.016	.000	1.6185+06	1.6047+03
980	.762	.190	.049	.000	2.3771+04	6.9189+07	2280	.921	.063	.016	.000	1.6538+06	1.5339+03
1000	.763	.184	.053	.000	2.8276+04	6.0644+06	2300	.922	.062	.015	.000	1.6889+06	1.4675+03
1020	.765	.178	.057	.000	3.3380+04	1.8268+08	2320	.923	.061	.015	.000	1.7239+06	1.4051+03
1040	.767	.173	.060	.000	3.9121+04	1.7302+07	2340	.924	.061	.015	.000	1.7587+06	1.3464+03
1060	.768	.168	.064	.000	4.5531+04	2.1181+06	2360	.925	.060	.015	.000	1.7934+06	1.2910+03
1080	.770	.163	.067	.000	5.2641+04	8.6019+05	2380	.926	.060	.014	.000	1.8278+06	1.2388+03
1100	.772	.159	.069	.000	6.0475+04	5.9529+05	2400	.927	.059	.014	.000	1.8620+06	1.1895+03
1120	.775	.155	.071	.000	6.9054+04	6.1083+05	2420	.928	.058	.014	.000	1.8961+06	1.1430+03
1140	.777	.151	.072	.000	7.8394+04	8.7149+05	2440	.929	.058	.013	.000	1.9299+06	1.0989+03
1160	.780	.147	.072	.000	8.8506+04	1.6989+06	2460	.930	.057	.013	.000	1.9634+06	1.0573+03
1180	.784	.144	.073	.000	9.9397+04	5.0188+06	2480	.931	.056	.013	.000	1.9968+06	1.0178+03
1200	.787	.141	.072	.000	1.1107+05	3.9014+07	2500	.931	.056	.013	.000	2.0298+06	9.8033+02
1220	.791	.138	.071	.000	1.2353+05	9.2041+08	2520	.932	.055	.013	.000	2.0626+06	9.4479+02
1240	.795	.135	.070	.000	1.3678+05	1.3010+07	2540	.933	.055	.012	.000	2.0949+06	9.1104+02
1260	.800	.132	.068	.000	1.5080+05	2.8870+06	2560	.934	.054	.012	.000	2.1267+06	8.7896+02
1280	.805	.130	.066	.000	1.6561+05	1.1396+06	2580	.934	.054	.012	.000	2.1583+06	8.4845+02
1300	.809	.127	.063	.000	1.8120+05	5.8489+05	2600	.935	.053	.012	.000	2.1896+06	8.1941+02
1320	.814	.125	.061	.000	1.9754+05	3.4892+05	2620	.936	.053	.011	.000	2.2205+06	7.9174+02
1340	.819	.123	.058	.000	2.1461+05	2.2931+05	2640	.937	.052	.011	.000	2.2511+06	7.6537+02
1360	.824	.121	.055	.000	2.3245+05	1.6114+05	2660	.937	.052	.011	.000	2.2815+06	7.4022+02
1380	.829	.119	.052	.000	2.5104+05	1.1889+05	2680	.938	.051	.011	.000	2.3114+06	7.1622+02
1400	.834	.117	.049	.000	2.7039+05	9.1011+04	2700	.939	.051	.011	.000	2.3411+06	6.9329+02
1420	.839	.115	.046	.000	2.9049+05	7.1698+04	2720	.939	.050	.010	.000	2.3704+06	6.7138+02
1440	.844	.113	.043	.000	3.1135+05	5.7798+04	2740	.940	.050	.010	.000	2.3994+06	6.5044+02
1460	.849	.111	.040	.000	3.3294+05	4.7476+04	2760	.941	.049	.010	.000	2.4284+06	6.3040+02
1480	.853	.110	.037	.000	3.5528+05	3.9613+04	2780	.941	.049	.010	.000	2.4566+06	6.1122+02
1500	.857	.108	.035	.000	3.7836+05	3.3492+04	2800	.942	.048	.010	.000	2.4846+06	5.9284+02
1520	.860	.106	.034	.000	4.0291+05	2.8641+04	2820	.942	.048	.010	.000	2.5121+06	5.7524+02
1540	.862	.104	.034	.000	4.2820+05	2.4735+04	2840	.943	.047	.010	.000	2.5394+06	5.5836+02
1560	.864	.102	.033	.000	4.5421+05	2.1546+04	2860	.944	.047	.009	.000	2.5662+06	5.4217+02
1580	.867	.101	.033	.000	4.8091+05	1.8913+04	2880	.944	.047	.009	.000	2.5927+06	5.2663+02
1600	.869	.099	.032	.000	5.0829+05	1.6715+04	2900	.945	.046	.009	.000	2.6188+06	5.1170+02
1620	.871	.097	.031	.000	5.3632+05	1.4863+04	2920	.945	.046	.009	.000	2.6446+06	4.9737+02
1640	.873	.096	.031	.000	5.6497+05	1.3290+04	2940	.946	.045	.009	.000	2.6699+06	4.8359+02
1660	.875	.094	.030	.000	5.9422+05	1.1943+04	2960	.946	.045	.009	.000	2.6950+06	4.7035+02
1680	.878	.093	.030	.000	6.2404+05	1.0781+04	2980	.947	.045	.009	.000	2.7196+06	4.5760+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=13500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.947	.044	.008	.000	2.7439+06	4.4534+02	8600	.920	.074	.006	.000	3.5148+05	5.1123+04
3020	.948	.044	.008	.000	2.7677+06	4.3353+02	8700	.851	.139	.010	.000	1.8267+05	5.8808+04
3040	.948	.043	.008	.000	2.7913+06	4.2216+02	8800	.853	.136	.010	.000	1.8046+05	6.6467+04
3060	.949	.043	.008	.000	2.8144+06	4.1120+02	8900	.856	.134	.010	.000	1.7829+05	7.1959+04
3080	.949	.043	.008	.000	2.8372+06	4.0064+02	9000	.858	.132	.010	.000	1.7613+05	8.0456+04
3100	.950	.042	.008	.000	2.8596+06	3.9045+02	9100	.861	.130	.009	.000	1.7401+05	9.7674+04
3120	.950	.042	.008	.000	2.8816+06	3.8063+02	9200	.863	.128	.009	.000	1.7193+05	9.1172+04
3140	.951	.042	.008	.000	2.9033+06	3.7115+02	9300	.865	.126	.009	.000	1.6987+05	1.1694+05
3160	.951	.041	.007	.000	2.9244+06	3.6199+02	9400	.868	.124	.009	.000	1.6784+05	1.2171+05
3180	.952	.041	.007	.000	2.9451+06	3.5315+02	9500	.870	.122	.009	.000	1.6585+05	1.2664+05
3200	.952	.041	.007	.000	2.9654+06	3.4461+02	9600	.872	.120	.008	.000	1.6389+05	1.2848+05
3220	.953	.040	.007	.000	2.9854+06	3.3636+02	9700	.874	.118	.008	.000	1.6196+05	1.3381+05
3240	.953	.040	.007	.000	3.0050+06	3.2838+02	9800	.876	.116	.008	.000	1.6005+05	1.4286+05
3260	.954	.040	.007	.000	3.0243+06	3.2066+02	9900	.878	.114	.008	.000	1.5818+05	1.5789+05
3280	.954	.039	.007	.000	3.0431+06	3.1320+02	10000	.880	.113	.007	.000	1.5634+05	1.6741+05
3300	.954	.039	.007	.000	3.0617+06	3.0598+02	10100	.882	.111	.007	.000	1.5452+05	1.6172+05
3320	.955	.039	.007	.000	3.0798+06	2.9899+02	10200	.883	.109	.007	.000	1.5273+05	1.3854+05
3340	.955	.038	.007	.000	3.0976+06	2.9222+02	10300	.885	.108	.007	.000	1.5097+05	1.1252+05
3360	.956	.038	.006	.000	3.1151+06	2.8566+02	10400	.887	.106	.007	.000	1.4924+05	9.8895+04
3380	.956	.038	.006	.000	3.1322+06	2.7931+02	10500	.889	.105	.007	.000	1.4754+05	9.8579+04
3400	.956	.037	.006	.000	3.1489+06	2.7316+02	10600	.890	.103	.006	.000	1.4586+05	1.1549+05
3420	.957	.037	.006	.000	3.1652+06	2.6719+02	10700	.892	.102	.006	.000	1.4421+05	1.5003+05
3440	.957	.037	.006	.000	3.1812+06	2.6141+02	10800	.894	.100	.006	.000	1.4259+05	1.7147+05
3460	.958	.036	.006	.000	3.1969+06	2.5580+02	10900	.895	.099	.006	.000	1.4099+05	6.9951+04
3480	.958	.036	.006	.000	3.2122+06	2.5035+02	11000	.897	.098	.006	.000	1.3941+05	1.0785+05
3500	.958	.036	.006	.000	3.2272+06	2.4507+02	11100	.898	.096	.006	.000	1.3790+05	1.6232+05
3520	.958	.036	.006	.000	3.2424+06	2.3994+02	11200	.899	.095	.006	.000	1.3638+05	1.2328+05
3540	.959	.035	.006	.000	3.2568+06	2.3497+02	11300	.901	.094	.005	.000	1.3488+05	8.1989+04
3560	.959	.035	.006	.000	3.2710+06	2.3013+02	11400	.903	.091	.005	.000	1.3518+05	5.5351+04
3580	.960	.035	.006	.000	3.2848+06	2.2544+02	11500	.905	.090	.005	.000	1.3370+05	3.9679+04
5100	.825	.156	.018	.000	4.9276+05	9.9546+04	11600	.906	.089	.005	.000	1.3225+05	3.0711+04
5200	.830	.152	.018	.000	4.9004+05	4.5810+04	11700	.907	.088	.005	.000	1.3081+05	2.5771+04
5300	.835	.149	.017	.000	4.8716+05	2.7160+04	11800	.908	.087	.005	.000	1.2940+05	2.3560+04
5400	.839	.145	.016	.000	4.8399+05	1.8802+04	11900	.910	.086	.005	.000	1.2800+05	2.3504+04
5500	.843	.141	.015	.000	4.8060+05	1.4571+04	12000	.911	.085	.005	.000	1.2663+05	2.5571+04
5600	.847	.138	.015	.000	4.7705+05	1.2433+04	12100	.912	.084	.005	.000	1.2527+05	3.0516+04
5700	.851	.135	.014	.000	4.7337+05	1.1644+04	12200	.913	.083	.004	.000	1.2394+05	3.9926+04
5800	.855	.132	.014	.000	4.6957+05	1.2019+04	12300	.914	.082	.004	.000	1.2262+05	5.7394+04
5900	.858	.129	.013	.000	4.6566+05	1.3780+04	12400	.915	.081	.004	.000	1.2132+05	9.0827+04
6000	.862	.126	.013	.000	4.6166+05	1.7725+04	12500	.916	.080	.004	.000	1.2004+05	1.5907+05
6100	.865	.123	.012	.000	4.5755+05	2.5959+04	12600	.917	.079	.004	.000	1.1878+05	3.0395+05
6200	.868	.120	.012	.000	4.5336+05	4.4537+04	12700	.918	.078	.004	.000	1.1754+05	5.7486+05
6300	.871	.117	.011	.000	4.4911+05	9.5539+04	12800	.919	.077	.004	.000	1.1631+05	1.8610+05
6400	.874	.115	.011	.000	4.4482+05	3.0589+05	12900	.920	.077	.004	.000	1.1511+05	6.5300+05
6500	.877	.112	.011	.000	4.4049+05	5.3964+06	13000	.920	.076	.004	.000	1.1392+05	3.8699+05
6600	.880	.110	.010	.000	4.3612+05	1.6149+07	13100	.921	.075	.004	.000	1.1275+05	1.9776+05
6700	.882	.108	.010	.000	4.3173+05	4.6381+05	13200	.922	.074	.004	.000	1.1159+05	1.0763+05
6800	.885	.105	.010	.000	4.2733+05	1.2139+05	13300	.923	.073	.004	.000	1.1046+05	6.3734+04
6900	.887	.103	.009	.000	4.2293+05	5.1328+04	13400	.924	.073	.004	.000	1.0934+05	4.0841+04
7000	.890	.101	.009	.000	4.1850+05	2.7307+04	13500	.924	.072	.003	.000	1.0824+05	2.7923+04
7100	.892	.099	.009	.000	4.1406+05	1.6648+04	13600	.925	.071	.003	.000	1.0715+05	2.0123+04
7200	.894	.097	.008	.000	4.0963+05	1.1113+04	13700	.926	.071	.003	.000	1.0608+05	1.5159+04
7300	.897	.095	.008	.000	4.0521+05	7.9139+03	13800	.926	.070	.003	.000	1.0502+05	1.1807+04
7400	.899	.093	.008	.000	4.0081+05	5.9150+03	13900	.927	.070	.003	.000	1.0398+05	9.4713+03
7500	.901	.091	.008	.000	3.9644+05	4.5895+03	14000	.928	.069	.003	.000	1.0296+05	7.7779+03
7600	.903	.090	.007	.000	3.9208+05	3.6683+03	14100	.928	.068	.003	.000	1.0196+05	6.5197+03
7700	.905	.088	.007	.000	3.8774+05	3.0032+03	14200	.929	.068	.003	.000	1.0096+05	5.5648+03
7800	.907	.086	.007	.000	3.8343+05	2.5076+03	14300	.929	.067	.003	.000	9.9981+04	4.8161+03
7900	.909	.085	.007	.000	3.7915+05	2.1285+03	14400	.930	.067	.003	.000	9.9013+04	4.2248+03
8000	.910	.083	.007	.000	3.7514+05	1.8319+03	14500	.931	.066	.003	.000	9.8060+04	3.7513+03
8100	.912	.082	.006	.000	3.7091+05	1.5953+03	14600	.931	.066	.003	.000	9.7114+04	5.9900+03
8200	.914	.080	.006	.000	3.6670+05	1.4033+03	14700	.931	.066	.003	.000	9.6100+04	5.8352+03
8300	.915	.079	.006	.000	3.6284+05	3.2238+04	14800	.932	.065	.003	.000	9.5102+04	5.7453+03
8400	.917	.077	.006	.000	3.5902+05	3.7734+04	14900	.932	.065	.003	.000	9.4119+04	5.7100+03
8500	.919	.076	.006	.000	3.5523+05	4.4103+04	15000	.933	.064	.003	.000	9.3151+04	5.7218+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=14000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.3706+03	0.0000	1700	.903	.074	.023	.000	9.2244+05	1.3229+04
420	1.000	.000	.000	.000	4.2025+03	0.0000	1720	.904	.073	.023	.000	9.6391+05	1.2044+04
440	1.000	.000	.000	.000	1.1585+04	0.0000	1740	.906	.072	.022	.000	1.0059+06	1.1005+04
460	1.000	.000	.000	.000	2.9116+04	0.0000	1760	.908	.071	.022	.000	1.0485+06	1.0088+04
480	1.000	.000	.000	.000	6.7507+04	0.0000	1780	.909	.070	.021	.000	1.0916+06	9.2755+03
500	1.000	.000	.000	.000	1.4582+05	0.0000	1800	.911	.069	.021	.000	1.1351+06	8.5529+03
520	1.000	.000	.000	.000	2.9589+05	0.0000	1820	.912	.068	.020	.000	1.1790+06	7.9076+03
540	1.000	.000	.000	.000	5.6803+05	0.0000	1840	.913	.067	.020	.000	1.2231+06	7.3291+03
560	1.000	.000	.000	.000	1.0379+06	0.0000	1860	.915	.066	.020	.000	1.2674+06	6.8087+03
580	1.000	.000	.000	.000	1.8144+06	0.0000	1880	.916	.065	.019	.000	1.3121+06	6.3392+03
600	1.000	.000	.000	.000	3.0485+06	0.0000	1900	.918	.064	.019	.000	1.3570+06	5.9142+03
620	1.000	.000	.000	.000	4.9421+06	0.0000	1920	.919	.063	.018	.000	1.4022+06	5.5284+03
640	1.000	.000	.000	.000	7.7569+06	0.0000	1940	.920	.062	.018	.000	1.4475+06	5.1773+03
660	1.000	.000	.000	.000	1.1823+07	0.0000	1960	.921	.061	.017	.000	1.4930+06	4.8569+03
680	1.000	.000	.000	.000	1.7545+07	0.0000	1980	.923	.061	.017	.000	1.5387+06	4.5639+03
700	1.000	.000	.000	.000	2.5411+07	0.0000	2000	.924	.060	.017	.000	1.5845+06	4.2953+03
720	1.000	.000	.000	.000	3.5993+07	0.0000	2020	.925	.059	.016	.000	1.6304+06	4.0484+03
740	1.000	.000	.000	.000	4.9832+07	0.0000	2040	.926	.058	.016	.000	1.6765+06	3.8212+03
760	1.000	.000	.000	.000	6.7571+07	0.0000	2060	.927	.058	.016	.000	1.7225+06	3.6115+03
780	1.000	.000	.000	.000	9.0060+07	0.0000	2080	.928	.057	.015	.000	1.7686+06	3.4178+03
800	1.000	.000	.000	.000	1.1814+08	0.0000	2100	.929	.056	.015	.000	1.8146+06	3.2384+03
820	1.000	.000	.000	.000	1.5272+08	0.0000	2120	.930	.055	.015	.000	1.8606+06	3.0720+03
840	1.000	.000	.000	.000	1.9467+08	0.0000	2140	.931	.055	.014	.000	1.9064+06	2.9175+03
860	1.000	.000	.000	.000	2.4502+08	0.0000	2160	.932	.054	.014	.000	1.9522+06	2.7737+03
880	1.000	.000	.000	.000	3.0479+08	0.0000	2180	.933	.053	.014	.000	1.9979+06	2.6397+03
900	1.000	.000	.000	.000	3.7498+08	0.0000	2200	.933	.053	.014	.000	2.0434+06	2.5146+03
920	.797	.173	.029	.000	2.2247+04	2.6864+06	2220	.934	.052	.013	.000	2.0887+06	2.3978+03
940	.800	.167	.033	.000	2.6923+04	5.1390+07	2240	.935	.052	.013	.000	2.1338+06	2.2884+03
960	.802	.162	.036	.000	3.2303+04	6.4723+07	2260	.936	.051	.013	.000	2.1788+06	2.1860+03
980	.803	.157	.040	.000	3.8435+04	1.0583+08	2280	.937	.050	.013	.000	2.2235+06	2.0899+03
1000	.805	.152	.043	.000	4.5376+04	8.6916+06	2300	.938	.050	.012	.000	2.2679+06	1.9997+03
1020	.806	.147	.046	.000	5.3179+04	2.6296+08	2320	.938	.049	.012	.000	2.3121+06	1.9148+03
1040	.808	.143	.049	.000	6.1892+04	2.4644+07	2340	.939	.049	.012	.000	2.3560+06	1.8350+03
1060	.809	.139	.052	.000	7.1556+04	2.9945+06	2360	.940	.048	.012	.000	2.3996+06	1.7597+03
1080	.811	.135	.054	.000	8.2205+04	1.2051+06	2380	.941	.048	.012	.000	2.4429+06	1.6887+03
1100	.813	.131	.056	.000	9.3871+04	8.2292+05	2400	.941	.047	.011	.000	2.4859+06	1.6217+03
1120	.815	.128	.057	.000	1.0658+05	8.3251+05	2420	.942	.047	.011	.000	2.5285+06	1.5584+03
1140	.817	.125	.058	.000	1.2034+05	1.1757+06	2440	.943	.046	.011	.000	2.5707+06	1.4985+03
1160	.820	.122	.058	.000	1.3517+05	2.2796+06	2460	.944	.046	.011	.000	2.6127+06	1.4418+03
1180	.823	.119	.058	.000	1.5107+05	6.7177+06	2480	.944	.045	.010	.000	2.6542+06	1.3881+03
1200	.826	.116	.058	.000	1.6805+05	5.2106+07	2500	.945	.045	.010	.000	2.6953+06	1.3371+03
1220	.830	.114	.057	.000	1.8611+05	1.2273+09	2520	.946	.044	.010	.000	2.7361+06	1.2888+03
1240	.833	.111	.056	.000	2.0524+05	1.7393+07	2540	.946	.044	.010	.000	2.7761+06	1.2428+03
1260	.837	.109	.054	.000	2.2544+05	3.8636+06	2560	.947	.043	.010	.000	2.8155+06	1.1992+03
1280	.841	.107	.053	.000	2.4670+05	1.5255+06	2580	.947	.043	.010	.000	2.8545+06	1.1576+03
1300	.845	.105	.051	.000	2.6901+05	7.8299+05	2600	.948	.043	.009	.000	2.8930+06	1.1181+03
1320	.849	.103	.048	.000	2.9233+05	4.6713+05	2620	.949	.042	.009	.000	2.9311+06	1.0804+03
1340	.853	.101	.046	.000	3.1664+05	3.0706+05	2640	.949	.042	.009	.000	2.9688+06	1.0445+03
1360	.857	.099	.044	.000	3.4195+05	2.1585+05	2660	.950	.041	.009	.000	3.0060+06	1.0103+03
1380	.862	.097	.041	.000	3.6827+05	1.5933+05	2680	.950	.041	.009	.000	3.0427+06	9.7758+02
1400	.866	.095	.039	.000	3.9558+05	1.2204+05	2700	.951	.041	.009	.000	3.0790+06	9.4636+02
1420	.870	.094	.037	.000	4.2388+05	9.6202+04	2720	.951	.040	.008	.000	3.1148+06	9.1652+02
1440	.873	.092	.034	.000	4.5315+05	7.7605+04	2740	.952	.040	.008	.000	3.1502+06	8.8798+02
1460	.877	.091	.032	.000	4.8338+05	6.3792+04	2760	.952	.039	.008	.000	3.1853+06	8.6068+02
1480	.881	.089	.030	.000	5.1456+05	5.3265+04	2780	.953	.039	.008	.000	3.2197+06	8.3454+02
1500	.884	.088	.028	.000	5.4667+05	4.5068+04	2800	.953	.039	.008	.000	3.2536+06	8.0951+02
1520	.886	.086	.028	.000	5.8053+05	3.8567+04	2820	.954	.038	.008	.000	3.2870+06	7.8551+02
1540	.888	.085	.027	.000	6.1530+05	3.3330+04	2840	.954	.038	.008	.000	3.3199+06	7.6251+02
1560	.890	.083	.027	.000	6.5097+05	2.9053+04	2860	.955	.038	.008	.000	3.3523+06	7.4044+02
1580	.892	.082	.026	.000	6.8748+05	2.5518+04	2880	.955	.037	.008	.000	3.3843+06	7.1926+02
1600	.894	.080	.026	.000	7.2481+05	2.2566+04	2900	.956	.037	.007	.000	3.4157+06	6.9891+02
1620	.896	.079	.025	.000	7.6292+05	2.0077+04	2920	.956	.037	.007	.000	3.4466+06	6.7937+02
1640	.898	.078	.025	.000	8.0178+05	1.7962+04	2940	.957	.036	.007	.000	3.4770+06	6.6059+02
1660	.899	.076	.024	.000	8.4134+05	1.6149+04	2960	.957	.036	.007	.000	3.5070+06	6.4253+02
1680	.901	.075	.024	.000	8.8157+05	1.4586+04	2980	.957	.036	.007	.000	3.5364+06	6.2515+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T = 14000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.958	.035	.007	.000	3.5654+06	6.0843+02	8600	.938	.057	.004	.000	4.4996+05	6.5118+04
3020	.958	.035	.007	.000	3.5938+06	5.9232+02	8700	.939	.056	.004	.000	4.4516+05	7.4277+04
3040	.959	.035	.007	.000	3.6218+06	5.7681+02	8800	.887	.105	.008	.000	2.3285+05	8.2256+04
3060	.959	.034	.007	.000	3.6493+06	5.6187+02	8900	.889	.103	.008	.000	2.3010+05	8.8528+04
3080	.959	.034	.006	.000	3.6763+06	5.4746+02	9000	.891	.101	.007	.000	2.2739+05	9.8734+04
3100	.960	.034	.006	.000	3.7028+06	5.3357+02	9100	.893	.100	.007	.000	2.2471+05	1.2025+05
3120	.960	.034	.006	.000	3.7288+06	5.2016+02	9200	.895	.098	.007	.000	2.2208+05	1.1068+05
3140	.961	.033	.006	.000	3.7543+06	5.0722+02	9300	.896	.097	.007	.000	2.1948+05	1.4147+05
3160	.961	.033	.006	.000	3.7791+06	4.9474+02	9400	.898	.095	.007	.000	2.1691+05	1.4856+05
3180	.961	.033	.006	.000	3.8034+06	4.8267+02	9500	.900	.094	.007	.000	2.1439+05	1.5682+05
3200	.962	.032	.006	.000	3.8272+06	4.7102+02	9600	.901	.092	.006	.000	2.1190+05	1.6112+05
3220	.962	.032	.006	.000	3.8505+06	4.5976+02	9700	.903	.091	.006	.000	2.0945+05	1.6708+05
3240	.962	.032	.006	.000	3.8734+06	4.4887+02	9800	.904	.089	.006	.000	2.0704+05	1.7912+05
3260	.963	.032	.006	.000	3.8957+06	4.3834+02	9900	.906	.088	.006	.000	2.0466+05	1.9694+05
3280	.963	.031	.006	.000	3.9177+06	4.2815+02	10000	.907	.087	.006	.000	2.0232+05	1.9907+05
3300	.963	.031	.005	.000	3.9391+06	4.1830+02	10100	.909	.086	.006	.000	2.0001+05	1.9293+05
3320	.964	.031	.005	.000	3.9601+06	4.0876+02	10200	.910	.084	.005	.000	1.9774+05	1.7578+05
3340	.964	.031	.005	.000	3.9807+06	3.9952+02	10300	.912	.083	.005	.000	1.9550+05	1.4738+05
3360	.964	.030	.005	.000	4.0008+06	3.9057+02	10400	.913	.082	.005	.000	1.9329+05	1.3399+05
3380	.965	.030	.005	.000	4.0204+06	3.8190+02	10500	.914	.081	.005	.000	1.9112+05	1.3547+05
3400	.965	.030	.005	.000	4.0395+06	3.7350+02	10600	.916	.080	.005	.000	1.8898+05	1.5559+05
3420	.965	.030	.005	.000	4.0582+06	3.6535+02	10700	.917	.079	.005	.000	1.8688+05	1.9071+05
3440	.966	.029	.005	.000	4.0764+06	3.5745+02	10800	.918	.077	.005	.000	1.8480+05	1.9998+05
3460	.966	.029	.005	.000	4.0942+06	3.4979+02	10900	.919	.076	.004	.000	1.8276+05	7.8352+04
3480	.966	.029	.005	.000	4.1116+06	3.4236+02	11000	.920	.075	.004	.000	1.8075+05	1.1816+05
3500	.967	.029	.005	.000	4.1286+06	3.3515+02	11100	.921	.074	.004	.000	1.7881+05	1.9123+05
3520	.967	.029	.005	.000	4.1457+06	3.2815+02	11200	.922	.073	.004	.000	1.7686+05	1.5762+05
3540	.967	.028	.005	.000	4.1620+06	3.2135+02	11300	.923	.072	.004	.000	1.7494+05	1.1108+05
3560	.967	.028	.005	.000	4.1779+06	3.1475+02	11400	.925	.071	.004	.000	1.7554+05	7.7710+04
3580	.968	.028	.005	.000	4.1934+06	3.0833+02	11500	.926	.070	.004	.000	1.7364+05	5.6937+04
5100	.864	.122	.015	.000	6.3254+05	1.4410+05	11600	.927	.069	.004	.000	1.7177+05	4.4566+04
5200	.868	.118	.014	.000	6.2901+05	6.6303+04	11700	.928	.068	.004	.000	1.6992+05	3.7662+04
5300	.871	.115	.013	.000	6.2529+05	3.9290+04	11800	.929	.067	.004	.000	1.6810+05	3.4532+04
5400	.875	.112	.013	.000	6.2118+05	2.7176+04	11900	.930	.066	.004	.000	1.6631+05	3.4425+04
5500	.878	.110	.012	.000	6.1679+05	2.1034+04	12000	.931	.066	.004	.000	1.6453+05	3.7491+04
5600	.881	.107	.012	.000	6.1219+05	1.7914+04	12100	.932	.065	.003	.000	1.6278+05	4.4636+04
5700	.884	.104	.011	.000	6.0742+05	1.6736+04	12200	.933	.064	.003	.000	1.6106+05	5.8134+04
5800	.887	.102	.011	.000	6.0250+05	1.7225+04	12300	.933	.063	.003	.000	1.5936+05	8.2708+04
5900	.890	.100	.010	.000	5.9744+05	1.9687+04	12400	.934	.063	.003	.000	1.5768+05	1.2899+05
6000	.893	.097	.010	.000	5.9226+05	2.5247+04	12500	.935	.062	.003	.000	1.5603+05	2.1919+05
6100	.895	.095	.009	.000	5.8694+05	3.6881+04	12600	.935	.061	.003	.000	1.5440+05	3.9814+05
6200	.898	.093	.009	.000	5.8151+05	6.3147+04	12700	.936	.061	.003	.000	1.5279+05	6.9102+05
6300	.900	.091	.009	.000	5.7601+05	1.3524+05	12800	.937	.060	.003	.000	1.5121+05	1.8272+05
6400	.903	.089	.009	.000	5.7045+05	4.3237+05	12900	.938	.060	.003	.000	1.4965+05	7.4777+05
6500	.905	.087	.008	.000	5.6485+05	7.5240+06	13000	.938	.059	.003	.000	1.4811+05	4.9365+05
6600	.907	.085	.008	.000	5.5920+05	2.4334+07	13100	.939	.058	.003	.000	1.4659+05	2.6810+05
6700	.909	.083	.008	.000	5.5353+05	6.5526+05	13200	.939	.058	.003	.000	1.4509+05	1.5120+05
6800	.911	.081	.008	.000	5.4784+05	1.7173+05	13300	.940	.057	.003	.000	1.4362+05	9.1402+04
6900	.913	.080	.007	.000	5.4214+05	7.2687+04	13400	.941	.057	.003	.000	1.4217+05	5.9220+04
7000	.915	.078	.007	.000	5.3642+05	3.8704+04	13500	.941	.056	.003	.000	1.4073+05	4.0670+04
7100	.917	.077	.007	.000	5.3069+05	2.3616+04	13600	.942	.056	.003	.000	1.3932+05	2.9373+04
7200	.918	.075	.007	.000	5.2497+05	1.5776+04	13700	.942	.055	.003	.000	1.3793+05	2.2136+04
7300	.920	.073	.006	.000	5.1927+05	1.1242+04	13800	.943	.055	.003	.000	1.3656+05	1.7283+04
7400	.922	.072	.006	.000	5.1359+05	8.4080+03	13900	.943	.054	.002	.000	1.3521+05	1.3848+04
7500	.923	.071	.006	.000	5.0794+05	6.5278+03	14000	.944	.054	.002	.000	1.3387+05	1.1375+04
7600	.925	.069	.006	.000	5.0231+05	5.2205+03	14100	.944	.054	.003	.000	1.3257+05	9.5261+03
7700	.926	.068	.006	.000	4.9671+05	4.2762+03	14200	.944	.053	.002	.000	1.3128+05	8.1250+03
7800	.928	.067	.005	.000	4.9115+05	3.5724+03	14300	.945	.053	.002	.000	1.3000+05	7.0382+03
7900	.929	.065	.005	.000	4.8563+05	3.0338+03	14400	.945	.052	.002	.000	1.2874+05	6.1745+03
8000	.931	.064	.005	.000	4.8049+05	2.6122+03	14500	.946	.052	.002	.000	1.2750+05	5.4806+03
8100	.932	.063	.005	.000	4.7504+05	2.2758+03	14600	.946	.052	.002	.000	1.2626+05	8.4397+03
8200	.933	.062	.005	.000	4.6961+05	2.0028+03	14700	.946	.051	.002	.000	1.2495+05	8.1777+03
8300	.935	.061	.005	.000	4.6462+05	4.2687+04	14800	.947	.051	.002	.000	1.2365+05	8.0080+03
8400	.936	.060	.005	.000	4.5969+05	4.9305+04	14900	.947	.051	.002	.000	1.2237+05	7.9141+03
8500	.937	.059	.004	.000	4.5480+05	5.6855+04	15000	.947	.051	.002	.000	1.2111+05	7.8850+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=14500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	2.7245+03	0.0000	1700	.922	.059	.019	.000	1.2315+06	1.6694+04
420	1.000	.000	.000	.000	8.0087+03	0.0000	1720	.923	.059	.018	.000	1.2842+06	1.5205+04
440	1.000	.000	.000	.000	2.1246+04	0.0000	1740	.925	.058	.018	.000	1.3375+06	1.3898+04
460	1.000	.000	.000	.000	5.1560+04	0.0000	1760	.926	.057	.017	.000	1.3914+06	1.2745+04
480	1.000	.000	.000	.000	1.1577+05	0.0000	1780	.927	.056	.017	.000	1.4458+06	1.1723+04
500	1.000	.000	.000	.000	2.4279+05	0.0000	1800	.928	.055	.017	.000	1.5006+06	1.0813+04
520	1.000	.000	.000	.000	4.7942+05	0.0000	1820	.929	.054	.016	.000	1.5558+06	1.0000+04
540	1.000	.000	.000	.000	8.9740+05	0.0000	1840	.931	.053	.016	.000	1.6111+06	9.2713+03
560	1.000	.000	.000	.000	1.6017+06	0.0000	1860	.932	.053	.016	.000	1.6666+06	8.6155+03
580	1.000	.000	.000	.000	2.7397+06	0.0000	1880	.933	.052	.015	.000	1.7224+06	8.0234+03
600	1.000	.000	.000	.000	4.5104+06	0.0000	1900	.934	.051	.015	.000	1.7784+06	7.4874+03
620	1.000	.000	.000	.000	7.1739+06	0.0000	1920	.935	.051	.015	.000	1.8345+06	7.0007+03
640	1.000	.000	.000	.000	1.1060+07	0.0000	1940	.936	.050	.014	.000	1.8908+06	6.5576+03
660	1.000	.000	.000	.000	1.6577+07	0.0000	1960	.937	.049	.014	.000	1.9472+06	6.1531+03
680	1.000	.000	.000	.000	2.4216+07	0.0000	1980	.938	.049	.014	.000	2.0037+06	5.7831+03
700	1.000	.000	.000	.000	3.4554+07	0.0000	2000	.939	.048	.013	.000	2.0601+06	5.4437+03
720	1.000	.000	.000	.000	4.8259+07	0.0000	2020	.940	.047	.013	.000	2.1167+06	5.1319+03
740	1.000	.000	.000	.000	6.5932+07	0.0000	2040	.941	.047	.013	.000	2.1733+06	4.8447+03
760	1.000	.000	.000	.000	8.8282+07	0.0000	2060	.941	.046	.013	.000	2.2297+06	4.5797+03
780	1.000	.000	.000	.000	1.1627+08	0.0000	2080	.942	.046	.012	.000	2.2861+06	4.3347+03
800	1.000	.000	.000	.000	1.5080+08	0.0000	2100	.943	.045	.012	.000	2.3423+06	4.1079+03
820	1.000	.000	.000	.000	1.9284+08	0.0000	2120	.944	.044	.012	.000	2.3984+06	3.8974+03
840	1.000	.000	.000	.000	2.4329+08	0.0000	2140	.945	.044	.012	.000	2.4542+06	3.7019+03
860	1.000	.000	.000	.000	3.0323+08	0.0000	2160	.945	.043	.011	.000	2.5098+06	3.5199+03
880	1.000	.000	.000	.000	3.7369+08	0.0000	2180	.946	.043	.011	.000	2.5652+06	3.3503+03
900	1.000	.000	.000	.000	4.5564+08	0.0000	2200	.947	.042	.011	.000	2.6203+06	3.1920+03
920	.834	.142	.024	.000	3.4601+04	3.6648+06	2220	.947	.042	.011	.000	2.6751+06	3.0441+03
940	.836	.137	.027	.000	4.1550+04	7.1811+07	2240	.948	.041	.011	.000	2.7295+06	2.9057+03
960	.838	.133	.030	.000	4.9480+04	9.1818+07	2260	.949	.041	.010	.000	2.7836+06	2.7759+03
980	.839	.129	.032	.000	5.8448+04	1.4926+08	2280	.949	.040	.010	.000	2.8374+06	2.6542+03
1000	.840	.125	.035	.000	6.8523+04	1.1566+07	2300	.950	.040	.010	.000	2.8907+06	2.5399+03
1020	.842	.121	.037	.000	7.9770+04	3.5126+08	2320	.951	.039	.010	.000	2.9436+06	2.4324+03
1040	.843	.117	.040	.000	9.2242+04	3.2598+07	2340	.951	.039	.010	.000	2.9961+06	2.3312+03
1060	.845	.114	.042	.000	1.0599+05	3.9344+06	2360	.952	.039	.009	.000	3.0482+06	2.2359+03
1080	.846	.111	.043	.000	1.2105+05	1.5702+06	2380	.953	.038	.009	.000	3.0998+06	2.1459+03
1100	.848	.108	.045	.000	1.3745+05	1.0594+06	2400	.953	.038	.009	.000	3.1510+06	2.0610+03
1120	.850	.105	.046	.000	1.5523+05	1.0576+06	2420	.954	.037	.009	.000	3.2016+06	1.9807+03
1140	.852	.102	.046	.000	1.7438+05	1.4789+06	2440	.954	.037	.009	.000	3.2518+06	1.9047+03
1160	.854	.100	.046	.000	1.9494+05	2.8526+06	2460	.955	.037	.009	.000	3.3014+06	1.8328+03
1180	.857	.097	.046	.000	2.1689+05	8.3849+06	2480	.955	.036	.008	.000	3.3505+06	1.7647+03
1200	.859	.095	.046	.000	2.4024+05	6.4895+07	2500	.956	.036	.008	.000	3.3991+06	1.7000+03
1220	.862	.093	.045	.000	2.6498+05	1.5262+09	2520	.956	.035	.008	.000	3.4471+06	1.6387+03
1240	.865	.091	.044	.000	2.9111+05	2.1682+07	2540	.957	.035	.008	.000	3.4941+06	1.5804+03
1260	.868	.089	.043	.000	3.1860+05	4.8219+06	2560	.957	.035	.008	.000	3.5404+06	1.5250+03
1280	.871	.087	.042	.000	3.4745+05	1.9046+06	2580	.958	.034	.008	.000	3.5861+06	1.4723+03
1300	.875	.085	.040	.000	3.7764+05	9.7765+05	2600	.958	.034	.008	.000	3.6312+06	1.4221+03
1320	.878	.083	.039	.000	4.0911+05	5.8334+05	2620	.959	.034	.007	.000	3.6757+06	1.3743+03
1340	.882	.082	.037	.000	4.4180+05	3.8353+05	2640	.959	.033	.007	.000	3.7196+06	1.3287+03
1360	.885	.080	.035	.000	4.7576+05	2.6969+05	2660	.960	.033	.007	.000	3.7629+06	1.2852+03
1380	.888	.079	.033	.000	5.1096+05	1.9916+05	2680	.960	.033	.007	.000	3.8056+06	1.2437+03
1400	.892	.077	.031	.000	5.4740+05	1.5263+05	2700	.961	.032	.007	.000	3.8477+06	1.2041+03
1420	.895	.076	.029	.000	5.8504+05	1.2039+05	2720	.961	.032	.007	.000	3.8892+06	1.1662+03
1440	.898	.075	.027	.000	6.2387+05	9.7183+04	2740	.962	.032	.007	.000	3.9300+06	1.1300+03
1460	.901	.073	.026	.000	6.6386+05	7.9940+04	2760	.962	.031	.007	.000	3.9706+06	1.0953+03
1480	.904	.072	.024	.000	7.0498+05	6.6795+04	2780	.962	.031	.007	.000	4.0102+06	1.0621+03
1500	.907	.071	.022	.000	7.4721+05	5.6554+04	2800	.963	.031	.006	.000	4.0492+06	1.0303+03
1520	.909	.069	.022	.000	7.9140+05	4.8429+04	2820	.963	.031	.006	.000	4.0876+06	9.9980+02
1540	.910	.068	.022	.000	8.3666+05	4.1880+04	2840	.963	.030	.006	.000	4.1253+06	9.7057+02
1560	.912	.067	.021	.000	8.8294+05	3.6529+04	2860	.964	.030	.006	.000	4.1624+06	9.4253+02
1580	.913	.066	.021	.000	9.3019+05	3.2104+04	2880	.964	.030	.006	.000	4.1989+06	9.1562+02
1600	.915	.065	.021	.000	9.7838+05	2.8407+04	2900	.965	.030	.006	.000	4.2347+06	8.8977+02
1620	.916	.064	.020	.000	1.0274+06	2.5288+04	2920	.965	.029	.006	.000	4.2699+06	8.6494+02
1640	.918	.062	.020	.000	1.0773+06	2.2635+04	2940	.965	.029	.006	.000	4.3045+06	8.4106+02
1660	.919	.061	.019	.000	1.1280+06	2.0360+04	2960	.966	.029	.006	.000	4.3385+06	8.1811+02
1680	.921	.060	.019	.000	1.1794+06	1.8398+04	2980	.966	.028	.006	.000	4.3719+06	7.9602+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=14500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.966	.028	.006	.000	4.4046+06	7.7476+02	8600	.952	.044	.003	.000	5.4951+05	7.8851+04
3020	.967	.028	.005	.000	4.4367+06	7.5429+02	8700	.953	.044	.003	.000	5.4356+05	8.9339+04
3040	.967	.028	.005	.000	4.4682+06	7.3458+02	8800	.914	.080	.006	.000	2.8747+05	9.7348+04
3060	.967	.027	.005	.000	4.4991+06	7.1557+02	8900	.915	.079	.006	.000	2.8412+05	1.0448+05
3080	.968	.027	.005	.000	4.5294+06	6.9726+02	9000	.917	.078	.006	.000	2.8081+05	1.1615+05
3100	.968	.027	.005	.000	4.5591+06	6.7959+02	9100	.918	.077	.006	.000	2.7754+05	1.4156+05
3120	.968	.027	.005	.000	4.5882+06	6.6254+02	9200	.919	.075	.005	.000	2.7432+05	1.2902+05
3140	.968	.027	.005	.000	4.6167+06	6.4609+02	9300	.921	.074	.005	.000	2.7114+05	1.6385+05
3160	.969	.026	.005	.000	4.6443+06	6.3021+02	9400	.922	.073	.005	.000	2.6800+05	1.7379+05
3180	.969	.026	.005	.000	4.6712+06	6.1487+02	9500	.923	.072	.005	.000	2.6491+05	1.8504+05
3200	.969	.026	.005	.000	4.6976+06	6.0005+02	9600	.924	.071	.005	.000	2.6187+05	1.9192+05
3220	.970	.026	.005	.000	4.7233+06	5.8572+02	9700	.925	.070	.005	.000	2.5886+05	1.9810+05
3240	.970	.025	.005	.000	4.7485+06	5.7187+02	9800	.927	.069	.005	.000	2.5590+05	2.1317+05
3260	.970	.025	.005	.000	4.7732+06	5.5848+02	9900	.928	.068	.005	.000	2.5299+05	2.3375+05
3280	.970	.025	.004	.000	4.7972+06	5.4552+02	10000	.929	.067	.004	.000	2.5012+05	2.2806+05
3300	.971	.025	.004	.000	4.8207+06	5.3298+02	10100	.930	.066	.004	.000	2.4729+05	2.2185+05
3320	.971	.025	.004	.000	4.8437+06	5.2084+02	10200	.931	.065	.004	.000	2.4449+05	2.1218+05
3340	.971	.024	.004	.000	4.8661+06	5.0909+02	10300	.932	.064	.004	.000	2.4174+05	1.8224+05
3360	.972	.024	.004	.000	4.8880+06	4.9770+02	10400	.933	.063	.004	.000	2.3904+05	1.6954+05
3380	.972	.024	.004	.000	4.9092+06	4.8667+02	10500	.934	.062	.004	.000	2.3637+05	1.7298+05
3400	.972	.024	.004	.000	4.9299+06	4.7598+02	10600	.935	.061	.004	.000	2.3374+05	1.9514+05
3420	.972	.024	.004	.000	4.9500+06	4.6561+02	10700	.936	.061	.004	.000	2.3115+05	2.2834+05
3440	.972	.024	.004	.000	4.9697+06	4.5556+02	10800	.937	.060	.003	.000	2.2860+05	2.2440+05
3460	.973	.023	.004	.000	4.9888+06	4.4581+02	10900	.938	.059	.003	.000	2.2609+05	8.6972+04
3480	.973	.023	.004	.000	5.0074+06	4.3635+02	11000	.939	.058	.003	.000	2.2362+05	1.2725+05
3500	.973	.023	.004	.000	5.0255+06	4.2717+02	11100	.939	.057	.003	.000	2.2121+05	2.1567+05
3520	.973	.023	.004	.000	5.0436+06	4.1826+02	11200	.940	.057	.003	.000	2.1881+05	1.8942+05
3540	.974	.023	.004	.000	5.0609+06	4.0961+02	11300	.941	.056	.003	.000	2.1645+05	1.4005+05
3560	.974	.022	.004	.000	5.0777+06	4.0121+02	11400	.942	.054	.003	.000	2.1742+05	1.0121+05
3580	.974	.022	.004	.000	5.0941+06	3.9304+02	11500	.943	.054	.003	.000	2.1508+05	7.5602+04
5100	.895	.094	.011	.000	7.7775+05	1.9348+05	11600	.944	.053	.003	.000	2.1277+05	5.9923+04
5200	.898	.091	.011	.000	7.7321+05	8.9012+04	11700	.945	.053	.003	.000	2.1048+05	5.0935+04
5300	.901	.089	.010	.000	7.6847+05	5.2724+04	11800	.945	.052	.003	.000	2.0823+05	4.6814+04
5400	.903	.087	.010	.000	7.6322+05	3.6441+04	11900	.946	.051	.003	.000	2.0601+05	4.6763+04
5500	.906	.085	.009	.000	7.5765+05	2.8170+04	12000	.947	.051	.003	.000	2.0382+05	5.0905+04
5600	.908	.083	.009	.000	7.5183+05	2.3950+04	12100	.947	.050	.003	.000	2.0165+05	6.0514+04
5700	.911	.081	.009	.000	7.4580+05	2.2323+04	12200	.948	.050	.003	.000	1.9952+05	7.8361+04
5800	.913	.079	.008	.000	7.3959+05	2.2912+04	12300	.948	.049	.003	.000	1.9741+05	1.1054+05
5900	.915	.077	.008	.000	7.3321+05	2.6110+04	12400	.949	.049	.002	.000	1.9534+05	1.6953+05
6000	.917	.075	.008	.000	7.2669+05	3.3391+04	12500	.949	.048	.002	.000	1.9329+05	2.8056+05
6100	.919	.073	.007	.000	7.2001+05	4.8660+04	12600	.950	.048	.002	.000	1.9127+05	4.8818+05
6200	.921	.072	.007	.000	7.1319+05	8.3153+04	12700	.950	.047	.002	.000	1.8927+05	7.8951+05
6300	.923	.070	.007	.000	7.0629+05	1.7781+05	12800	.951	.047	.002	.000	1.8731+05	1.7796+05
6400	.925	.068	.007	.000	6.9932+05	5.6766+05	12900	.951	.046	.002	.000	1.8537+05	8.2135+05
6500	.927	.067	.006	.000	6.9230+05	9.7801+06	13000	.952	.046	.002	.000	1.8346+05	5.9249+05
6600	.928	.065	.006	.000	6.8524+05	2.9936+07	13100	.952	.045	.002	.000	1.8158+05	3.3822+05
6700	.930	.064	.006	.000	6.7815+05	8.5986+05	13200	.953	.045	.002	.000	1.7972+05	1.9686+05
6800	.931	.063	.006	.000	6.7105+05	2.2565+05	13300	.953	.045	.002	.000	1.7789+05	1.2117+05
6900	.933	.061	.006	.000	6.6394+05	9.5606+04	13400	.954	.044	.002	.000	1.7608+05	7.9361+04
7000	.934	.060	.006	.000	6.5681+05	5.0953+04	13500	.954	.044	.002	.000	1.7430+05	5.4868+04
7100	.936	.059	.005	.000	6.4967+05	3.1114+04	13600	.954	.044	.002	.000	1.7255+05	3.9761+04
7200	.937	.058	.005	.000	6.4255+05	2.0800+04	13700	.955	.043	.002	.000	1.7082+05	2.9980+04
7300	.938	.057	.005	.000	6.3546+05	1.4833+04	13800	.955	.043	.002	.000	1.6912+05	2.3380+04
7400	.940	.056	.005	.000	6.2840+05	1.1100+04	13900	.956	.043	.002	.000	1.6743+05	1.8792+04
7500	.941	.054	.005	.000	6.2138+05	8.6231+03	14000	.956	.042	.002	.000	1.6578+05	1.5417+04
7600	.942	.053	.005	.000	6.1439+05	6.9000+03	14100	.956	.042	.002	.000	1.6416+05	1.2917+04
7700	.943	.052	.004	.000	6.0744+05	5.6550+03	14200	.957	.042	.002	.000	1.6254+05	1.1003+04
7800	.944	.051	.004	.000	6.0055+05	4.7266+03	14300	.957	.041	.002	.000	1.6096+05	9.5259+03
7900	.945	.051	.004	.000	5.9370+05	4.0158+03	14400	.957	.041	.002	.000	1.5939+05	8.3583+03
8000	.946	.050	.004	.000	5.8737+05	3.4593+03	14500	.957	.041	.002	.000	1.5785+05	7.4227+03
8100	.947	.049	.004	.000	5.8061+05	3.0150+03	14600	.958	.041	.002	.000	1.5631+05	1.1096+04
8200	.948	.048	.004	.000	5.7388+05	2.6543+03	14700	.958	.040	.002	.000	1.5468+05	1.0704+04
8300	.949	.047	.004	.000	5.6769+05	5.3231+04	14800	.958	.040	.002	.000	1.5306+05	1.0434+04
8400	.950	.046	.004	.000	5.6157+05	6.0860+04	14900	.958	.040	.002	.000	1.5148+05	1.0266+04
8500	.951	.045	.003	.000	5.5551+05	6.9467+04	15000	.959	.040	.002	.000	1.4991+05	1.0183+04

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TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=15000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	4.9933+03	0.0000	1700	.938	.048	.015	.000	1.5620+06	1.9729+04
420	1.000	.000	.000	.000	1.4111+04	0.0000	1720	.939	.047	.015	.000	1.6257+06	1.7977+04
440	1.000	.000	.000	.000	3.6119+04	0.0000	1740	.940	.046	.014	.000	1.6899+06	1.6438+04
460	1.000	.000	.000	.000	8.4836+04	0.0000	1760	.941	.045	.014	.000	1.7547+06	1.5079+04
480	1.000	.000	.000	.000	1.8486+05	0.0000	1780	.942	.045	.014	.000	1.8199+06	1.3875+04
500	1.000	.000	.000	.000	3.7716+05	0.0000	1800	.943	.044	.013	.000	1.8856+06	1.2802+04
520	1.000	.000	.000	.000	7.2602+05	0.0000	1820	.944	.043	.013	.000	1.9516+06	1.1843+04
540	1.000	.000	.000	.000	1.3274+06	0.0000	1840	.945	.043	.013	.000	2.0175+06	1.0983+04
560	1.000	.000	.000	.000	2.3179+06	0.0000	1860	.945	.042	.012	.000	2.0835+06	1.0209+04
580	1.000	.000	.000	.000	3.8847+06	0.0000	1880	.946	.041	.012	.000	2.1497+06	9.5100+03
600	1.000	.000	.000	.000	6.2750+06	0.0000	1900	.947	.041	.012	.000	2.2160+06	8.8769+03
620	1.000	.000	.000	.000	9.8048+06	0.0000	1920	.948	.040	.012	.000	2.2824+06	8.3017+03
640	1.000	.000	.000	.000	1.4867+07	0.0000	1940	.949	.040	.011	.000	2.3488+06	7.7780+03
660	1.000	.000	.000	.000	2.1936+07	0.0000	1960	.950	.039	.011	.000	2.4152+06	7.2998+03
680	1.000	.000	.000	.000	3.1574+07	0.0000	1980	.950	.039	.011	.000	2.4816+06	6.8622+03
700	1.000	.000	.000	.000	4.4432+07	0.0000	2000	.951	.038	.011	.000	2.5478+06	6.4607+03
720	1.000	.000	.000	.000	6.1247+07	0.0000	2020	.952	.038	.010	.000	2.6140+06	6.0917+03
740	1.000	.000	.000	.000	8.2643+07	0.0000	2040	.953	.037	.010	.000	2.6801+06	5.7518+03
760	1.000	.000	.000	.000	1.0936+08	0.0000	2060	.953	.037	.010	.000	2.7459+06	5.4381+03
780	1.000	.000	.000	.000	1.4243+08	0.0000	2080	.954	.036	.010	.000	2.8115+06	5.1481+03
800	1.000	.000	.000	.000	1.8279+08	0.0000	2100	.955	.036	.010	.000	2.8768+06	4.8794+03
820	1.000	.000	.000	.000	2.3140+08	0.0000	2120	.955	.035	.009	.000	2.9418+06	4.6301+03
840	1.000	.000	.000	.000	2.8915+08	0.0000	2140	.956	.035	.009	.000	3.0065+06	4.3985+03
860	1.000	.000	.000	.000	3.5710+08	0.0000	2160	.956	.035	.009	.000	3.0708+06	4.1828+03
880	1.000	.000	.000	.000	4.3625+08	0.0000	2180	.957	.034	.009	.000	3.1346+06	3.9818+03
900	1.000	.000	.000	.000	5.2750+08	0.0000	2200	.957	.034	.009	.000	3.1981+06	3.7942+03
920	.865	.115	.020	.000	5.0728+04	4.6532+06	2220	.958	.033	.009	.000	3.2610+06	3.6188+03
940	.867	.111	.022	.000	6.0475+04	8.8761+07	2240	.959	.033	.008	.000	3.3235+06	3.4547+03
960	.868	.108	.024	.000	7.1515+04	1.1704+08	2260	.959	.033	.008	.000	3.3855+06	3.3008+03
980	.870	.104	.026	.000	8.3907+04	1.9475+08	2280	.960	.032	.008	.000	3.4470+06	3.1564+03
1000	.871	.101	.028	.000	9.7734+04	1.4355+07	2300	.960	.032	.008	.000	3.5079+06	3.0208+03
1020	.872	.098	.030	.000	1.1307+05	4.3714+08	2320	.961	.031	.008	.000	3.5682+06	2.8933+03
1040	.873	.095	.032	.000	1.2996+05	4.0230+07	2340	.961	.031	.008	.000	3.6280+06	2.7732+03
1060	.874	.092	.033	.000	1.4848+05	4.8267+06	2360	.962	.031	.008	.000	3.6871+06	2.6600+03
1080	.876	.090	.034	.000	1.6864+05	1.9121+06	2380	.962	.030	.007	.000	3.7457+06	2.5532+03
1100	.877	.087	.035	.000	1.9050+05	1.2758+06	2400	.963	.030	.007	.000	3.8036+06	2.4524+03
1120	.879	.085	.036	.000	2.1406+05	1.2580+06	2420	.963	.030	.007	.000	3.8608+06	2.3571+03
1140	.881	.083	.037	.000	2.3934+05	1.7427+06	2440	.964	.029	.007	.000	3.9174+06	2.2669+03
1160	.883	.081	.037	.000	2.6635+05	3.3438+06	2460	.964	.029	.007	.000	3.9734+06	2.1815+03
1180	.885	.079	.037	.000	2.9508+05	9.8038+06	2480	.964	.029	.007	.000	4.0286+06	2.1006+03
1200	.887	.077	.036	.000	3.2552+05	7.5710+07	2500	.965	.029	.007	.000	4.0832+06	2.0238+03
1220	.889	.075	.036	.000	3.5767+05	1.7779+09	2520	.965	.028	.007	.000	4.1370+06	1.9509+03
1240	.892	.073	.035	.000	3.9150+05	2.5319+07	2540	.966	.028	.006	.000	4.1896+06	1.8817+03
1260	.894	.072	.034	.000	4.2698+05	5.6374+06	2560	.966	.028	.006	.000	4.2413+06	1.8158+03
1280	.897	.070	.033	.000	4.6410+05	2.2276+06	2580	.966	.027	.006	.000	4.2922+06	1.7532+03
1300	.900	.069	.032	.000	5.0283+05	1.1437+06	2600	.967	.027	.006	.000	4.3424+06	1.6936+03
1320	.902	.067	.030	.000	5.4309+05	6.8251+05	2620	.967	.027	.006	.000	4.3919+06	1.6367+03
1340	.905	.066	.029	.000	5.8478+05	4.4883+05	2640	.968	.027	.006	.000	4.4406+06	1.5826+03
1360	.908	.065	.028	.000	6.2797+05	3.1572+05	2660	.968	.026	.006	.000	4.4885+06	1.5309+03
1380	.911	.063	.026	.000	6.7262+05	2.3326+05	2680	.968	.026	.006	.000	4.5357+06	1.4815+03
1400	.913	.062	.025	.000	7.1870+05	1.7885+05	2700	.969	.026	.006	.000	4.5821+06	1.4344+03
1420	.916	.061	.023	.000	7.6617+05	1.4116+05	2720	.969	.026	.005	.000	4.6278+06	1.3893+03
1440	.918	.060	.022	.000	8.1501+05	1.1401+05	2740	.969	.025	.005	.000	4.6728+06	1.3463+03
1460	.921	.059	.020	.000	8.6516+05	9.3846+04	2760	.970	.025	.005	.000	4.7172+06	1.3050+03
1480	.923	.058	.019	.000	9.1659+05	7.8466+04	2780	.970	.025	.005	.000	4.7606+06	1.2655+03
1500	.925	.057	.018	.000	9.6926+05	6.6480+04	2800	.970	.025	.005	.000	4.8033+06	1.2277+03
1520	927	.056	.018	.000	1.0240+06	5.6965+04	2820	.971	.024	.005	.000	4.8452+06	1.1915+03
1540	.928	.055	.017	.000	1.0799+06	4.9293+04	2840	.971	.024	.005	.000	4.8863+06	1.1567+03
1560	.929	.054	.017	.000	1.1369+06	4.3021+04	2860	.971	.024	.005	.000	4.9267+06	1.1233+03
1580	.931	.053	.017	.000	1.1950+06	3.7832+04	2880	.971	.024	.005	.000	4.9663+06	1.0913+03
1600	.932	.052	.016	.000	1.2541+06	3.3493+04	2900	.972	.024	.005	.000	5.0052+06	1.0606+03
1620	.933	.051	.016	.000	1.3140+06	2.9831+04	2920	.972	.023	.005	.000	5.0433+06	1.0310+03
1640	.934	.050	.016	.000	1.3749+06	2.6715+04	2940	.972	.023	.005	.000	5.0807+06	1.0026+03
1660	.935	.049	.015	.000	1.4365+06	2.4042+04	2960	.973	.023	.005	.000	5.1174+06	9.7528+02
1680	.937	.048	.015	.000	1.4989+06	2.1734+04	2980	.973	.023	.005	.000	5.1533+06	9.4899+02

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=15000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.973	.022	.004	.000	5.1884+06	9.2369+02	8600	.963	.034	.003	.000	6.4151+05	9.1129+04
3020	.973	.022	.004	.000	5.2229+06	8.9933+02	8700	.964	.034	.003	.000	6.3444+05	1.0267+05
3040	.974	.022	.004	.000	5.2566+06	8.7586+02	8800	.934	.061	.005	.000	3.3994+05	1.1056+05
3060	.974	.022	.004	.000	5.2896+06	8.5324+02	8900	.935	.060	.004	.000	3.3599+05	1.1848+05
3080	.974	.022	.004	.000	5.3218+06	8.3143+02	9000	.936	.059	.004	.000	3.3207+05	1.3128+05
3100	.974	.022	.004	.000	5.3534+06	8.1039+02	9100	.937	.059	.004	.000	3.2821+05	1.5989+05
3120	.975	.021	.004	.000	5.3843+06	7.9010+02	9200	.938	.058	.004	.000	3.2440+05	1.4481+05
3140	.975	.021	.004	.000	5.4145+06	7.7051+02	9300	.939	.057	.004	.000	3.2064+05	1.8255+05
3160	.975	.021	.004	.000	5.4436+06	7.5160+02	9400	.940	.056	.004	.000	3.1694+05	1.9539+05
3180	.975	.021	.004	.000	5.4720+06	7.3333+02	9500	.941	.055	.004	.000	3.1329+05	2.0903+05
3200	.976	.021	.004	.000	5.4997+06	7.1568+02	9600	.942	.054	.004	.000	3.0969+05	2.1818+05
3220	.976	.020	.004	.000	5.5267+06	6.9862+02	9700	.943	.053	.004	.000	3.0614+05	2.2454+05
3240	.976	.020	.004	.000	5.5530+06	6.8213+02	9800	.944	.053	.004	.000	3.0264+05	2.4217+05
3260	.976	.020	.004	.000	5.5787+06	6.6618+02	9900	.945	.052	.003	.000	2.9919+05	2.6522+05
3280	.976	.020	.004	.000	5.6038+06	6.5074+02	10000	.945	.051	.003	.000	2.9579+05	2.5230+05
3300	.977	.020	.004	.000	5.6281+06	6.3581+02	10100	.946	.051	.003	.000	2.9245+05	2.4641+05
3320	.977	.020	.004	.000	5.6519+06	6.2134+02	10200	.947	.050	.003	.000	2.8914+05	2.4435+05
3340	.977	.020	.003	.000	5.6750+06	6.0734+02	10300	.948	.049	.003	.000	2.8589+05	2.1375+05
3360	.977	.019	.003	.000	5.6975+06	5.9378+02	10400	.949	.048	.003	.000	2.8269+05	2.0196+05
3380	.977	.019	.003	.000	5.7193+06	5.8064+02	10500	.949	.048	.003	.000	2.7953+05	2.0712+05
3400	.978	.019	.003	.000	5.7405+06	5.6790+02	10600	.950	.047	.003	.000	2.7643+05	2.3029+05
3420	.978	.019	.003	.000	5.7610+06	5.5555+02	10700	.951	.047	.003	.000	2.7336+05	2.5991+05
3440	.978	.019	.003	.000	5.7809+06	5.4357+02	10800	.951	.046	.003	.000	2.7034+05	2.4365+05
3460	.978	.019	.003	.000	5.8003+06	5.3195+02	10900	.952	.045	.003	.000	2.6737+05	9.5008+04
3480	.978	.018	.003	.000	5.8191+06	5.2068+02	11000	.953	.045	.002	.000	2.6444+05	1.3464+05
3500	.979	.018	.003	.000	5.8373+06	5.0974+02	11100	.953	.044	.003	.000	2.6159+05	2.3459+05
3520	.979	.018	.003	.000	5.8554+06	4.9912+02	11200	.954	.044	.002	.000	2.5874+05	2.1607+05
3540	.979	.018	.003	.000	5.8727+06	4.8881+02	11300	.954	.043	.002	.000	2.5594+05	1.6600+05
3560	.979	.018	.003	.000	5.8894+06	4.7880+02	11400	.956	.042	.002	.000	2.5733+05	1.2314+05
3580	.979	.018	.003	.000	5.9057+06	4.6907+02	11500	.956	.042	.002	.000	2.5456+05	9.3666+04
5100	.919	.072	.009	.000	9.1687+05	2.4217+05	11600	.957	.041	.002	.000	2.5181+05	7.4975+04
5200	.921	.070	.008	.000	9.1114+05	1.1140+05	11700	.957	.041	.002	.000	2.4911+05	6.4154+04
5300	.923	.068	.008	.000	9.0522+05	6.5960+04	11800	.958	.040	.002	.000	2.4643+05	5.9122+04
5400	.926	.067	.008	.000	8.9869+05	4.5557+04	11900	.958	.040	.002	.000	2.4379+05	5.9082+04
5500	.928	.065	.007	.000	8.9181+05	3.5178+04	12000	.959	.039	.002	.000	2.4119+05	6.4301+04
5600	.930	.063	.007	.000	8.8465+05	2.9859+04	12100	.959	.039	.002	.000	2.3862+05	7.6197+04
5700	.931	.062	.007	.000	8.7724+05	2.7770+04	12200	.960	.039	.002	.000	2.3608+05	9.8288+04
5800	.933	.060	.006	.000	8.6964+05	2.8429+04	12300	.960	.038	.002	.000	2.3358+05	1.3749+05
5900	.935	.059	.006	.000	8.6185+05	3.2308+04	12400	.960	.038	.002	.000	2.3111+05	2.0805+05
6000	.936	.058	.006	.000	8.5391+05	4.1209+04	12500	.961	.037	.002	.000	2.2868+05	3.3679+05
6100	.938	.056	.006	.000	8.4578+05	5.9915+04	12600	.961	.037	.002	.000	2.2628+05	5.6592+05
6200	.939	.055	.006	.000	8.3750+05	1.0220+05	12700	.962	.037	.002	.000	2.2391+05	8.6481+05
6300	.941	.054	.005	.000	8.2914+05	2.1820+05	12800	.962	.036	.002	.000	2.2157+05	1.7237+05
6400	.942	.053	.005	.000	8.2071+05	6.9566+05	12900	.962	.036	.002	.000	2.1927+05	8.7178+05
6500	.944	.051	.005	.000	8.1223+05	1.1406+07	13000	.963	.036	.002	.000	2.1699+05	6.7485+05
6600	.945	.050	.005	.000	8.0371+05	3.5043+07	13100	.963	.035	.002	.000	2.1475+05	4.0131+05
6700	.946	.049	.005	.000	7.9517+05	1.0532+06	13200	.963	.035	.002	.000	2.1255+05	2.3969+05
6800	.947	.048	.005	.000	7.8662+05	2.7676+05	13300	.964	.035	.002	.000	2.1037+05	1.5007+05
6900	.948	.047	.004	.000	7.7807+05	1.1737+05	13400	.964	.035	.002	.000	2.0822+05	9.9088+04
7000	.949	.046	.004	.000	7.6951+05	6.2607+04	13500	.964	.034	.002	.000	2.0611+05	6.9000+04
7100	.950	.045	.004	.000	7.6095+05	3.8261+04	13600	.965	.034	.002	.000	2.0402+05	5.0162+04
7200	.951	.045	.004	.000	7.5242+05	2.5596+04	13700	.965	.034	.001	.000	2.0196+05	3.7884+04
7300	.952	.044	.004	.000	7.4393+05	1.8265+04	13800	.965	.033	.001	.000	1.9993+05	2.9560+04
7400	.953	.043	.004	.000	7.3549+05	1.3677+04	13900	.965	.033	.001	.000	1.9793+05	2.3700+04
7500	.954	.042	.004	.000	7.2710+05	1.0631+04	14000	.966	.033	.001	.000	1.9596+05	1.9494+04
7600	.955	.041	.004	.000	7.1876+05	8.5116+03	14100	.966	.033	.001	.000	1.9403+05	1.6312+04
7700	.956	.040	.003	.000	7.1047+05	6.9793+03	14200	.966	.033	.001	.000	1.9211+05	1.3901+04
7800	.957	.040	.003	.000	7.0225+05	5.8363+03	14300	.966	.032	.001	.000	1.9022+05	1.2020+04
7900	.958	.039	.003	.000	6.9410+05	4.9609+03	14400	.966	.032	.001	.000	1.8836+05	1.0543+04
8000	.959	.038	.003	.000	6.8659+05	4.2752+03	14500	.967	.032	.001	.000	1.8652+05	9.3601+03
8100	.959	.038	.003	.000	6.7855+05	3.7276+03	14600	.967	.032	.001	.000	1.8470+05	1.3681+04
8200	.960	.037	.003	.000	6.7054+05	3.2830+03	14700	.967	.032	.001	.000	1.8276+05	1.3152+04
8300	.961	.036	.003	.000	6.6315+05	6.2875+04	14800	.967	.031	.001	.000	1.8084+05	1.2778+04
8400	.962	.036	.003	.000	6.5587+05	7.1334+04	14900	.967	.031	.001	.000	1.7896+05	1.2527+04
8500	.962	.035	.003	.000	6.4865+05	8.0786+04	15000	.968	.031	.001	.000	1.7711+05	1.2383+04

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

T=15500 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	8.5234+03	0.0000	1700	.950	.038	.012	.000	1.8940+06	2.1935+04
420	1.000	.000	.000	.000	2.3216+04	0.0000	1720	.951	.037	.012	.000	1.9676+06	1.9995+04
440	1.000	.000	.000	.000	5.7467+04	0.0000	1740	.952	.037	.011	.000	2.0416+06	1.8289+04
460	1.000	.000	.000	.000	1.3091+05	0.0000	1760	.953	.036	.011	.000	2.1161+06	1.6784+04
480	1.000	.000	.000	.000	2.7739+05	0.0000	1780	.954	.035	.011	.000	2.1910+06	1.5448+04
500	1.000	.000	.000	.000	5.5151+05	0.0000	1800	.955	.035	.011	.000	2.2661+06	1.4258+04
520	1.000	.000	.000	.000	1.0367+06	0.0000	1820	.955	.034	.010	.000	2.3415+06	1.3194+04
540	1.000	.000	.000	.000	1.8540+06	0.0000	1840	.956	.034	.010	.000	2.4166+06	1.2239+04
560	1.000	.000	.000	.000	3.1720+06	0.0000	1860	.957	.033	.010	.000	2.4918+06	1.1380+04
580	1.000	.000	.000	.000	5.2159+06	0.0000	1880	.957	.033	.010	.000	2.5669+06	1.0603+04
600	1.000	.000	.000	.000	8.2767+06	0.0000	1900	.958	.032	.009	.000	2.6421+06	9.8993+03
620	1.000	.000	.000	.000	1.2719+07	0.0000	1920	.959	.032	.009	.000	2.7172+06	9.2601+03
640	1.000	.000	.000	.000	1.8987+07	0.0000	1940	.959	.032	.009	.000	2.7921+06	8.6777+03
660	1.000	.000	.000	.000	2.7608+07	0.0000	1960	.960	.031	.009	.000	2.8669+06	8.1458+03
680	1.000	.000	.000	.000	3.9195+07	0.0000	1980	.961	.031	.009	.000	2.9415+06	7.6590+03
700	1.000	.000	.000	.000	5.4443+07	0.0000	2000	.961	.030	.008	.000	3.0159+06	7.2123+03
720	1.000	.000	.000	.000	7.4130+07	0.0000	2020	.962	.030	.008	.000	3.0901+06	6.8016+03
740	1.000	.000	.000	.000	9.8873+07	0.0000	2040	.962	.030	.008	.000	3.1639+06	6.4231+03
760	1.000	.000	.000	.000	1.2941+08	0.0000	2060	.963	.029	.008	.000	3.2374+06	6.0738+03
780	1.000	.000	.000	.000	1.6679+08	0.0000	2080	.963	.029	.008	.000	3.3104+06	5.7508+03
800	1.000	.000	.000	.000	2.1193+08	0.0000	2100	.964	.028	.008	.000	3.3831+06	5.4515+03
820	1.000	.000	.000	.000	2.6578+08	0.0000	2120	.964	.028	.008	.000	3.4552+06	5.1737+03
840	1.000	.000	.000	.000	3.2914+08	0.0000	2140	.965	.028	.007	.000	3.5268+06	4.9155+03
860	1.000	.000	.000	.000	4.0302+08	0.0000	2160	.965	.027	.007	.000	3.5979+06	4.6752+03
880	1.000	.000	.000	.000	4.8833+08	0.0000	2180	.966	.027	.007	.000	3.6684+06	4.4511+03
900	1.000	.000	.000	.000	5.8588+08	0.0000	2200	.966	.027	.007	.000	3.7383+06	4.2419+03
920	.891	.093	.016	.000	7.0578+04	5.5235+06	2220	.967	.026	.007	.000	3.8076+06	4.0463+03
940	.893	.090	.018	.000	8.3569+04	1.0277+08	2240	.967	.026	.007	.000	3.8763+06	3.8631+03
960	.894	.087	.019	.000	9.8179+04	1.3727+08	2260	.968	.026	.007	.000	3.9443+06	3.6915+03
980	.895	.084	.021	.000	1.1447+05	2.4327+08	2280	.968	.025	.006	.000	4.0116+06	3.5304+03
1000	.896	.081	.022	.000	1.3252+05	1.6696+07	2300	.968	.025	.006	.000	4.0781+06	3.3791+03
1020	.897	.079	.024	.000	1.5242+05	5.0904+08	2320	.969	.025	.006	.000	4.1440+06	3.2368+03
1040	.898	.076	.025	.000	1.7422+05	4.6537+07	2340	.969	.025	.006	.000	4.2091+06	3.1027+03
1060	.900	.074	.026	.000	1.9797+05	5.5551+06	2360	.970	.024	.006	.000	4.2734+06	2.9764+03
1080	.901	.072	.027	.000	2.2371+05	2.1858+06	2380	.970	.024	.006	.000	4.3370+06	2.8572+03
1100	.902	.070	.028	.000	2.5146+05	1.4438+06	2400	.970	.024	.006	.000	4.3997+06	2.7446+03
1120	.903	.068	.029	.000	2.8124+05	1.4073+06	2420	.971	.024	.006	.000	4.4617+06	2.6381+03
1140	.905	.066	.029	.000	3.1306+05	1.9319+06	2440	.971	.023	.006	.000	4.5229+06	2.5374+03
1160	.906	.065	.029	.000	3.4691+05	3.6881+06	2460	.971	.023	.005	.000	4.5832+06	2.4420+03
1180	.908	.063	.029	.000	3.8277+05	1.0786+07	2480	.972	.023	.005	.000	4.6427+06	2.3516+03
1200	.910	.062	.029	.000	4.2064+05	8.3111+07	2500	.972	.023	.005	.000	4.7014+06	2.2658+03
1220	.912	.060	.028	.000	4.6049+05	1.9487+09	2520	.972	.022	.005	.000	4.7592+06	2.1844+03
1240	.914	.059	.028	.000	5.0228+05	2.7820+07	2540	.973	.022	.005	.000	4.8155+06	2.1070+03
1260	.916	.057	.027	.000	5.4598+05	6.2016+06	2560	.973	.022	.005	.000	4.8707+06	2.0335+03
1280	.918	.056	.026	.000	5.9156+05	2.4518+06	2580	.973	.022	.005	.000	4.9250+06	1.9635+03
1300	.920	.055	.025	.000	6.3897+05	1.2591+06	2600	.974	.021	.005	.000	4.9785+06	1.8968+03
1320	.922	.054	.024	.000	6.8810+05	7.5151+05	2620	.974	.021	.005	.000	5.0311+06	1.8333+03
1340	.925	.053	.023	.000	7.3883+05	4.9433+05	2640	.974	.021	.005	.000	5.0828+06	1.7727+03
1360	.927	.052	.022	.000	7.9124+05	3.4784+05	2660	.975	.021	.005	.000	5.1336+06	1.7149+03
1380	.929	.051	.021	.000	8.4527+05	2.5710+05	2680	.975	.021	.005	.000	5.1835+06	1.6597+03
1400	.931	.050	.019	.000	9.0088+05	1.9722+05	2700	.975	.020	.004	.000	5.2325+06	1.6070+03
1420	.933	.049	.018	.000	9.5801+05	1.5575+05	2720	.975	.020	.004	.000	5.2807+06	1.5566+03
1440	.935	.048	.017	.000	1.0166+06	1.2587+05	2740	.976	.020	.004	.000	5.3280+06	1.5085+03
1460	.937	.047	.016	.000	1.0767+06	1.0367+05	2760	.976	.020	.004	.000	5.3746+06	1.4623+03
1480	.939	.046	.015	.000	1.1380+06	8.6735+04	2780	.976	.020	.004	.000	5.4202+06	1.4182+03
1500	.941	.045	.014	.000	1.2007+06	7.3531+04	2800	.976	.019	.004	.000	5.4648+06	1.3759+03
1520	.942	.044	.014	.000	1.2655+06	6.3046+04	2820	.977	.019	.004	.000	5.5086+06	1.3353+03
1540	.943	.043	.014	.000	1.3315+06	5.4587+04	2840	.977	.019	.004	.000	5.5515+06	1.2964+03
1560	.944	.043	.013	.000	1.3986+06	4.7669+04	2860	.977	.019	.004	.000	5.5935+06	1.2591+03
1580	.945	.042	.013	.000	1.4668+06	4.1942+04	2880	.977	.019	.004	.000	5.6347+06	1.2232+03
1600	.946	.041	.013	.000	1.5360+06	3.7152+04	2900	.978	.019	.004	.000	5.6750+06	1.1888+03
1620	.947	.040	.013	.000	1.6061+06	3.3107+04	2920	.978	.018	.004	.000	5.7144+06	1.1558+03
1640	.948	.040	.012	.000	1.6770+06	2.9663+04	2940	.978	.018	.004	.000	5.7530+06	1.1240+03
1660	.949	.039	.012	.000	1.7487+06	2.6707+04	2960	.978	.018	.004	.000	5.7908+06	1.0934+03
1680	.950	.038	.012	.000	1.8210+06	2.4154+04	2980	.978	.018	.004	.000	5.8277+06	1.0640+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T=15500\ K$

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.979	.018	.004	.000	5.8638+06	1.0356+03	8600	.971	.027	.002	.000	7.1814+05	9.0904+04
3020	.979	.018	.003	.000	5.8991+06	1.0084+03	8700	.972	.026	.002	.000	7.1006+05	1.0411+05
3040	.979	.018	.003	.000	5.9336+06	9.8209+02	8800	.949	.047	.004	.000	3.8497+05	1.1171+05
3060	.979	.017	.003	.000	5.9672+06	9.5677+02	8900	.950	.046	.003	.000	3.8047+05	1.1934+05
3080	.979	.017	.003	.000	6.0001+06	9.3235+02	9000	.951	.046	.003	.000	3.7601+05	1.3241+05
3100	.980	.017	.003	.000	6.0321+06	9.0880+02	9100	.952	.045	.003	.000	3.7161+05	1.6343+05
3120	.980	.017	.003	.000	6.0634+06	8.8608+02	9200	.953	.044	.003	.000	3.6727+05	1.4689+05
3140	.980	.017	.003	.000	6.0939+06	8.6414+02	9300	.953	.044	.003	.000	3.6300+05	1.8687+05
3160	.980	.017	.003	.000	6.1233+06	8.4296+02	9400	.954	.043	.003	.000	3.5878+05	2.0299+05
3180	.980	.016	.003	.000	6.1518+06	8.2250+02	9500	.955	.042	.003	.000	3.5462+05	2.1884+05
3200	.981	.016	.003	.000	6.1795+06	8.0274+02	9600	.956	.042	.003	.000	3.5052+05	2.3054+05
3220	.981	.016	.003	.000	6.2065+06	7.8363+02	9700	.956	.041	.003	.000	3.4648+05	2.3756+05
3240	.981	.016	.003	.000	6.2327+06	7.6515+02	9800	.957	.040	.003	.000	3.4250+05	2.5779+05
3260	.981	.016	.003	.000	6.2582+06	7.4728+02	9900	.957	.040	.003	.000	3.3858+05	2.8315+05
3280	.981	.016	.003	.000	6.2830+06	7.2999+02	10000	.958	.039	.003	.000	3.3472+05	2.6465+05
3300	.981	.016	.003	.000	6.3071+06	7.1326+02	10100	.959	.039	.002	.000	3.3091+05	2.5978+05
3320	.982	.016	.003	.000	6.3305+06	6.9706+02	10200	.959	.038	.002	.000	3.2715+05	2.6524+05
3340	.982	.015	.003	.000	6.3532+06	6.8137+02	10300	.960	.038	.002	.000	3.2346+05	2.3521+05
3360	.982	.015	.003	.000	6.3752+06	6.6618+02	10400	.960	.037	.002	.000	3.1981+05	2.2475+05
3380	.982	.015	.003	.000	6.3965+06	6.5145+02	10500	.961	.037	.002	.000	3.1622+05	2.3156+05
3400	.982	.015	.003	.000	6.4170+06	6.3718+02	10600	.961	.036	.002	.000	3.1269+05	2.5493+05
3420	.982	.015	.003	.000	6.4368+06	6.2334+02	10700	.962	.036	.002	.000	3.0921+05	2.8038+05
3440	.983	.015	.003	.000	6.4560+06	6.0992+02	10800	.962	.035	.002	.000	3.0577+05	2.5402+05
3460	.983	.015	.003	.000	6.4746+06	5.9690+02	10900	.963	.035	.002	.000	3.0239+05	9.9378+04
3480	.983	.015	.003	.000	6.4925+06	5.8427+02	11000	.963	.035	.002	.000	2.9906+05	1.3764+05
3500	.983	.015	.002	.000	6.5099+06	5.7201+02	11100	.964	.034	.002	.000	2.9581+05	2.4501+05
3520	.983	.014	.002	.000	6.5270+06	5.6011+02	11200	.964	.034	.002	.000	2.9258+05	2.3389+05
3540	.983	.014	.002	.000	6.5433+06	5.4855+02	11300	.965	.033	.002	.000	2.8939+05	1.8498+05
3560	.983	.014	.002	.000	6.5591+06	5.3733+02	11400	.966	.032	.002	.000	2.9124+05	1.4002+05
3580	.984	.014	.002	.000	6.5743+06	5.2642+02	11500	.966	.032	.002	.000	2.8808+05	1.0782+05
5100	.938	.055	.007	.000	1.0386+06	2.8229+05	11600	.967	.032	.002	.000	2.8495+05	8.7003+04
5200	.940	.054	.007	.000	1.0316+06	1.2923+05	11700	.967	.031	.002	.000	2.8187+05	7.4694+04
5300	.941	.052	.006	.000	1.0244+06	7.6137+04	11800	.967	.031	.002	.000	2.7882+05	6.9080+04
5400	.943	.051	.006	.000	1.0165+06	5.2359+04	11900	.968	.031	.002	.000	2.7582+05	6.9190+04
5500	.944	.050	.006	.000	1.0082+06	4.0297+04	12000	.968	.030	.002	.000	2.7285+05	7.5379+04
5600	.946	.049	.005	.000	9.9971+05	3.4133+04	12100	.968	.030	.002	.000	2.6992+05	8.9350+04
5700	.947	.047	.005	.000	9.9092+05	3.1720+04	12200	.969	.030	.001	.000	2.6703+05	1.1486+05
5800	.949	.046	.005	.000	9.8191+05	3.2484+04	12300	.969	.030	.001	.000	2.6418+05	1.6001+05
5900	.950	.045	.005	.000	9.7271+05	3.6963+04	12400	.969	.029	.001	.000	2.6137+05	2.3948+05
6000	.951	.044	.005	.000	9.6336+05	4.7224+04	12500	.970	.029	.001	.000	2.5860+05	3.8099+05
6100	.952	.043	.004	.000	9.5380+05	6.8766+04	12600	.970	.029	.001	.000	2.5587+05	6.2274+05
6200	.954	.042	.004	.000	9.4410+05	1.1742+05	12700	.970	.029	.001	.000	2.5317+05	9.1106+05
6300	.955	.041	.004	.000	9.3432+05	2.5079+05	12800	.970	.028	.001	.000	2.5050+05	1.6502+05
6400	.956	.040	.004	.000	9.2448+05	7.9930+05	12900	.971	.028	.001	.000	2.4788+05	8.9576+05
6500	.957	.039	.004	.000	9.1459+05	1.2998+07	13000	.971	.028	.001	.000	2.4529+05	7.3290+05
6600	.958	.039	.004	.000	9.0468+05	3.9035+07	13100	.971	.028	.001	.000	2.4274+05	4.5006+05
6700	.959	.038	.004	.000	8.9476+05	1.2098+06	13200	.971	.027	.001	.000	2.4022+05	2.7437+05
6800	.959	.037	.004	.000	8.8484+05	3.1815+05	13300	.972	.027	.001	.000	2.3774+05	1.7394+05
6900	.960	.036	.003	.000	8.7494+05	1.3495+05	13400	.972	.027	.001	.000	2.3530+05	1.1580+05
7000	.961	.036	.003	.000	8.6504+05	7.1963+04	13500	.972	.027	.001	.000	2.3289+05	8.0877+04
7100	.962	.035	.003	.000	8.5515+05	4.3955+04	13600	.972	.027	.001	.000	2.3051+05	5.8886+04
7200	.963	.034	.003	.000	8.4532+05	2.9382+04	13700	.973	.026	.001	.000	2.2817+05	4.4470+04
7300	.963	.034	.003	.000	8.3553+05	2.0946+04	13800	.973	.026	.001	.000	2.2586+05	3.4664+04
7400	.964	.033	.003	.000	8.2582+05	1.5668+04	13900	.973	.026	.001	.000	2.2359+05	2.7774+04
7500	.965	.032	.003	.000	8.1617+05	1.2165+04	14000	.973	.026	.001	.000	2.2134+05	2.2813+04
7600	.966	.032	.003	.000	8.0658+05	9.7275+03	14100	.973	.026	.001	.000	2.1914+05	1.9063+04
7700	.966	.031	.003	.000	7.9706+05	7.9665+03	14200	.973	.025	.001	.000	2.1696+05	1.6242+04
7800	.967	.031	.003	.000	7.8763+05	6.6537+03	14300	.974	.025	.001	.000	2.1480+05	1.4005+04
7900	.967	.030	.002	.000	7.7829+05	5.6488+03	14400	.974	.025	.001	.000	2.1268+05	1.2277+04
8000	.968	.030	.002	.000	7.6973+05	4.8623+03	14500	.974	.025	.001	.000	2.1059+05	1.0880+04
8100	.969	.029	.002	.000	7.6053+05	4.2347+03	14600	.974	.025	.001	.000	2.0851+05	1.4446+04
8200	.969	.029	.002	.000	7.5137+05	3.7255+03	14700	.974	.025	.001	.000	2.0631+05	1.3773+04
8300	.970	.028	.002	.000	7.4291+05	6.1042+04	14800	.974	.025	.001	.000	2.0414+05	1.3272+04
8400	.970	.028	.002	.000	7.3456+05	6.9598+04	14900	.974	.025	.001	.000	2.0200+05	1.2916+04
8500	.971	.027	.002	.000	7.2631+05	7.9485+04	15000	.975	.024	.001	.000	1.9989+05	1.2684+04

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE*—Continued

$T = 16000$ K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
400	1.000	.000	.000	.000	1.3590+04	0.0000	1700	.961	.030	.009	.000	2.1984+06	2.3159+04
420	1.000	.000	.000	.000	3.5761+04	0.0000	1720	.961	.029	.009	.000	2.2797+06	2.1118+04
440	1.000	.000	.000	.000	8.5783+04	0.0000	1740	.962	.029	.009	.000	2.3614+06	1.9324+04
460	1.000	.000	.000	.000	1.8990+05	0.0000	1760	.963	.029	.009	.000	2.4434+06	1.7739+04
480	1.000	.000	.000	.000	3.9193+05	0.0000	1780	.963	.028	.009	.000	2.5256+06	1.6332+04
500	1.000	.000	.000	.000	7.6065+05	0.0000	1800	.964	.028	.008	.000	2.6080+06	1.5079+04
520	1.000	.000	.000	.000	1.3983+06	0.0000	1820	.965	.027	.008	.000	2.6904+06	1.3958+04
540	1.000	.000	.000	.000	2.4495+06	0.0000	1840	.965	.027	.008	.000	2.7724+06	1.2951+04
560	1.000	.000	.000	.000	4.1112+06	0.0000	1860	.966	.026	.008	.000	2.8542+06	1.2045+04
580	1.000	.000	.000	.000	6.6405+06	0.0000	1880	.966	.026	.008	.000	2.9359+06	1.1225+04
600	1.000	.000	.000	.000	1.0363+07	0.0000	1900	.967	.026	.007	.000	3.0175+06	1.0483+04
620	1.000	.000	.000	.000	1.5679+07	0.0000	1920	.967	.025	.007	.000	3.0988+06	9.8079+03
640	1.000	.000	.000	.000	2.3066+07	0.0000	1940	.968	.025	.007	.000	3.1798+06	9.1930+03
660	1.000	.000	.000	.000	3.3081+07	0.0000	1960	.968	.025	.007	.000	3.2605+06	8.6313+03
680	1.000	.000	.000	.000	4.6362+07	0.0000	1980	.969	.024	.007	.000	3.3409+06	8.1169+03
700	1.000	.000	.000	.000	6.3619+07	0.0000	2000	.969	.024	.007	.000	3.4208+06	7.6449+03
720	1.000	.000	.000	.000	8.5633+07	0.0000	2020	.970	.024	.007	.000	3.5004+06	7.2108+03
740	1.000	.000	.000	.000	1.1298+08	0.0000	2040	.970	.023	.006	.000	3.5794+06	6.8107+03
760	1.000	.000	.000	.000	1.4635+08	0.0000	2060	.971	.023	.006	.000	3.6580+06	6.4413+03
780	1.000	.000	.000	.000	1.8679+08	0.0000	2080	.971	.023	.006	.000	3.7359+06	6.0996+03
800	1.000	.000	.000	.000	2.3515+08	0.0000	2100	.971	.023	.006	.000	3.8133+06	5.7830+03
820	1.000	.000	.000	.000	2.9230+08	0.0000	2120	.972	.022	.006	.000	3.8900+06	5.4891+03
840	1.000	.000	.000	.000	3.5894+08	0.0000	2140	.972	.022	.006	.000	3.9660+06	5.2159+03
860	1.000	.000	.000	.000	4.3600+08	0.0000	2160	.973	.022	.006	.000	4.0413+06	4.9615+03
880	1.000	.000	.000	.000	5.2426+08	0.0000	2180	.973	.021	.006	.000	4.1159+06	4.7243+03
900	1.000	.000	.000	.000	6.2440+08	0.0000	2200	.973	.021	.006	.000	4.1897+06	4.5027+03
920	.913	.074	.013	.000	9.3394+04	6.1864+06	2220	.974	.021	.005	.000	4.2628+06	4.2956+03
940	.914	.072	.014	.000	1.0988+05	1.1325+08	2240	.974	.021	.005	.000	4.3350+06	4.1016+03
960	.915	.069	.015	.000	1.2830+05	1.5229+08	2260	.974	.020	.005	.000	4.4065+06	3.9198+03
980	.916	.067	.017	.000	1.4870+05	2.8729+08	2280	.975	.020	.005	.000	4.4771+06	3.7492+03
1000	.917	.065	.018	.000	1.7117+05	1.8371+07	2300	.975	.020	.005	.000	4.5468+06	3.5888+03
1020	.918	.063	.019	.000	1.9579+05	5.5967+08	2320	.975	.020	.005	.000	4.6156+06	3.4380+03
1040	.919	.061	.020	.000	2.2262+05	5.0942+07	2340	.976	.020	.005	.000	4.6835+06	3.2959+03
1060	.920	.059	.021	.000	2.5170+05	6.0560+06	2360	.976	.019	.005	.000	4.7506+06	3.1620+03
1080	.921	.058	.021	.000	2.8305+05	2.3685+06	2380	.976	.019	.005	.000	4.8167+06	3.0356+03
1100	.922	.056	.022	.000	3.1670+05	1.5500+06	2400	.976	.019	.005	.000	4.8819+06	2.9162+03
1120	.923	.055	.022	.000	3.5265+05	1.4946+06	2420	.977	.019	.005	.000	4.9461+06	2.8034+03
1140	.924	.053	.023	.000	3.9089+05	2.0342+06	2440	.977	.018	.004	.000	5.0094+06	2.6966+03
1160	.926	.052	.023	.000	4.3140+05	3.8639+06	2460	.977	.018	.004	.000	5.0718+06	2.5954+03
1180	.927	.050	.023	.000	4.7417+05	1.1271+07	2480	.978	.018	.004	.000	5.1332+06	2.4995+03
1200	.928	.049	.022	.000	5.1917+05	8.6662+07	2500	.978	.018	.004	.000	5.1936+06	2.4085+03
1220	.930	.048	.022	.000	5.6635+05	2.0289+09	2520	.978	.018	.004	.000	5.2530+06	2.3221+03
1240	.932	.047	.022	.000	6.1568+05	2.9035+07	2540	.978	.018	.004	.000	5.3108+06	2.2400+03
1260	.933	.046	.021	.000	6.6709+05	6.4803+06	2560	.979	.017	.004	.000	5.3673+06	2.1620+03
1280	.935	.045	.020	.000	7.2055+05	2.5634+06	2580	.979	.017	.004	.000	5.4228+06	2.0877+03
1300	.937	.044	.020	.000	7.7600+05	1.3168+06	2600	.979	.017	.004	.000	5.4774+06	2.0169+03
1320	.938	.043	.019	.000	8.3329+05	7.8613+05	2620	.979	.017	.004	.000	5.5309+06	1.9495+03
1340	.940	.042	.018	.000	8.9227+05	5.1724+05	2640	.980	.017	.004	.000	5.5835+06	1.8852+03
1360	.942	.041	.017	.000	9.5303+05	3.6409+05	2660	.980	.017	.004	.000	5.6350+06	1.8239+03
1380	.944	.040	.016	.000	1.0155+06	2.6921+05	2680	.980	.016	.004	.000	5.6856+06	1.7653+03
1400	.945	.039	.015	.000	1.0796+06	2.0662+05	2700	.980	.016	.004	.000	5.7352+06	1.7093+03
1420	.947	.039	.014	.000	1.1453+06	1.6325+05	2720	.980	.016	.003	.000	5.7838+06	1.6558+03
1440	.949	.038	.014	.000	1.2125+06	1.3201+05	2740	.981	.016	.003	.000	5.8314+06	1.6047+03
1460	.950	.037	.013	.000	1.2812+06	1.0879+05	2760	.981	.016	.003	.000	5.8783+06	1.5557+03
1480	.952	.037	.012	.000	1.3512+06	9.1070+04	2780	.981	.016	.003	.000	5.9240+06	1.5088+03
1500	.953	.036	.011	.000	1.4225+06	7.7252+04	2800	.981	.015	.003	.000	5.9687+06	1.4638+03
1520	.954	.035	.011	.000	1.4959+06	6.6275+04	2820	.981	.015	.003	.000	6.0125+06	1.4207+03
1540	.955	.034	.011	.000	1.5704+06	5.7416+04	2840	.982	.015	.003	.000	6.0553+06	1.3794+03
1560	.956	.034	.011	.000	1.6459+06	5.0167+04	2860	.982	.015	.003	.000	6.0971+06	1.3398+03
1580	.956	.033	.010	.000	1.7225+06	4.4164+04	2880	.982	.015	.003	.000	6.1380+06	1.3017+03
1600	.957	.033	.010	.000	1.8000+06	3.9140+04	2900	.982	.015	.003	.000	6.1780+06	1.2651+03
1620	.958	.032	.010	.000	1.8784+06	3.4895+04	2920	.982	.015	.003	.000	6.2171+06	1.2300+03
1640	.959	.032	.010	.000	1.9574+06	3.1279+04	2940	.983	.015	.003	.000	6.2552+06	1.1962+03
1660	.959	.031	.010	.000	2.0372+06	2.8175+04	2960	.983	.014	.003	.000	6.2924+06	1.1637+03
1680	.960	.030	.009	.000	2.1175+06	2.5492+04	2980	.983	.014	.003	.000	6.3287+06	1.1325+03

TABLE 3. *Hydrogen emission coefficients for a one atmosphere plasma in LTE* — Continued

T=16000 K

λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum	λ	H^{atomic}	H^-	H_2^+	H_2^{quasi}	Total continuum	Line sum
3000	.983	.014	.003	.000	6.3641+06	1.1024+03	8600	.978	.021	.002	.000	7.7505+05	9.7361+04
3020	.983	.014	.003	.000	6.3987+06	1.0734+03	8700	.978	.020	.002	.000	7.6614+05	1.1096+05
3040	.983	.014	.003	.000	6.4323+06	1.0454+03	8800	.961	.036	.003	.000	4.2160+05	1.1825+05
3060	.984	.014	.003	.000	6.4651+06	1.0185+03	8900	.962	.035	.003	.000	4.1661+05	1.2635+05
3080	.984	.014	.003	.000	6.4970+06	9.9257+02	9000	.963	.035	.003	.000	4.1168+05	1.3977+05
3100	.984	.014	.003	.000	6.5281+06	9.6753+02	9100	.963	.034	.002	.000	4.0681+05	1.7214+05
3120	.984	.013	.003	.000	6.5584+06	9.4338+02	9200	.964	.034	.002	.000	4.0202+05	1.5423+05
3140	.984	.013	.003	.000	6.5878+06	9.2006+02	9300	.964	.033	.002	.000	3.9729+05	1.9500+05
3160	.984	.013	.003	.000	6.6160+06	8.9754+02	9400	.965	.033	.002	.000	3.9263+05	2.1311+05
3180	.984	.013	.002	.000	6.6432+06	8.7579+02	9500	.965	.032	.002	.000	3.8804+05	2.2990+05
3200	.985	.013	.002	.000	6.6697+06	8.5477+02	9600	.966	.032	.002	.000	3.8351+05	2.4297+05
3220	.985	.013	.002	.000	6.6954+06	8.3445+02	9700	.966	.031	.002	.000	3.7905+05	2.5000+05
3240	.985	.013	.002	.000	6.7202+06	8.1480+02	9800	.967	.031	.002	.000	3.7465+05	2.7162+05
3260	.985	.013	.002	.000	6.7444+06	7.9580+02	9900	.967	.031	.002	.000	3.7032+05	2.9811+05
3280	.985	.013	.002	.000	6.7677+06	7.7741+02	10000	.968	.030	.002	.000	3.6606+05	2.7505+05
3300	.985	.012	.002	.000	6.7903+06	7.5961+02	10100	.968	.030	.002	.000	3.6186+05	2.7078+05
3320	.985	.012	.002	.000	6.8122+06	7.4238+02	10200	.969	.029	.002	.000	3.5772+05	2.8192+05
3340	.986	.012	.002	.000	6.8333+06	7.2570+02	10300	.969	.029	.002	.000	3.5364+05	2.5254+05
3360	.986	.012	.002	.000	6.8538+06	7.0953+02	10400	.970	.029	.002	.000	3.4962+05	2.4297+05
3380	.986	.012	.002	.000	6.8734+06	6.9387+02	10500	.970	.028	.002	.000	3.4567+05	2.5066+05
3400	.986	.012	.002	.000	6.8923+06	6.7869+02	10600	.970	.028	.002	.000	3.4177+05	2.7342+05
3420	.986	.012	.002	.000	6.9105+06	6.6397+02	10700	.971	.028	.002	.000	3.3793+05	2.9479+05
3440	.986	.012	.002	.000	6.9280+06	6.4969+02	10800	.971	.027	.002	.000	3.3415+05	2.6086+05
3460	.986	.012	.002	.000	6.9448+06	6.3584+02	10900	.971	.027	.001	.000	3.3042+05	1.0350+05
3480	.986	.012	.002	.000	6.9609+06	6.2240+02	11000	.972	.027	.001	.000	3.2676+05	1.4002+05
3500	.986	.012	.002	.000	6.9765+06	6.0936+02	11100	.972	.026	.001	.000	3.2316+05	2.5139+05
3520	.987	.011	.002	.000	6.9917+06	5.9669+02	11200	.972	.026	.001	.000	3.1960+05	2.4607+05
3540	.987	.011	.002	.000	7.0063+06	5.8440+02	11300	.973	.026	.001	.000	3.1609+05	1.9895+05
3560	.987	.011	.002	.000	7.0202+06	5.7245+02	11400	.974	.025	.001	.000	3.1835+05	1.5306+05
3580	.987	.011	.002	.000	7.0335+06	5.6085+02	11500	.974	.025	.001	.000	3.1487+05	1.1909+05
5100	.952	.042	.005	.000	1.1357+06	3.1314+05	11600	.974	.025	.001	.000	3.1143+05	9.6773+04
5200	.954	.041	.005	.000	1.1274+06	1.4334+05	11700	.974	.024	.001	.000	3.0803+05	8.3414+04
5300	.955	.040	.005	.000	1.1189+06	8.4414+04	11800	.975	.024	.001	.000	3.0467+05	7.7241+04
5400	.956	.039	.005	.000	1.1097+06	5.8010+04	11900	.975	.024	.001	.000	3.0136+05	7.7417+04
5500	.957	.038	.004	.000	1.1001+06	4.4600+04	12000	.975	.024	.001	.000	2.9809+05	8.4329+04
5600	.959	.037	.004	.000	1.0902+06	3.7723+04	12100	.975	.023	.001	.000	2.9486+05	9.9786+04
5700	.960	.036	.004	.000	1.0801+06	3.4990+04	12200	.976	.023	.001	.000	2.9168+05	1.2784+05
5800	.961	.035	.004	.000	1.0698+06	3.5752+04	12300	.976	.023	.001	.000	2.8854+05	1.7711+05
5900	.962	.035	.004	.000	1.0593+06	4.0584+04	12400	.976	.023	.001	.000	2.8544+05	2.6280+05
6000	.963	.034	.004	.000	1.0486+06	5.1731+04	12500	.976	.023	.001	.000	2.8239+05	4.1242+05
6100	.963	.033	.003	.000	1.0378+06	7.5178+04	12600	.977	.022	.001	.000	2.7937+05	6.6057+05
6200	.964	.032	.003	.000	1.0267+06	1.2815+05	12700	.977	.022	.001	.000	2.7640+05	9.3505+05
6300	.965	.032	.003	.000	1.0157+06	2.7336+05	12800	.977	.022	.001	.000	2.7347+05	1.5832+05
6400	.966	.031	.003	.000	1.0046+06	8.7016+05	12900	.977	.022	.001	.000	2.7058+05	9.0261+05
6500	.967	.030	.003	.000	9.9343+05	1.4953+07	13000	.977	.022	.001	.000	2.6773+05	7.6947+05
6600	.967	.030	.003	.000	9.8229+05	4.1644+07	13100	.978	.021	.001	.000	2.6492+05	4.8389+05
6700	.968	.029	.003	.000	9.7115+05	1.3164+06	13200	.978	.021	.001	.000	2.6215+05	2.9957+05
6800	.969	.028	.003	.000	9.6003+05	3.4661+05	13300	.978	.021	.001	.000	2.5942+05	1.9189+05
6900	.969	.028	.003	.000	9.4894+05	1.4715+05	13400	.978	.021	.001	.000	2.5673+05	1.2848+05
7000	.970	.027	.003	.000	9.3787+05	7.8531+04	13500	.978	.021	.001	.000	2.5408+05	9.0066+04
7100	.971	.027	.002	.000	9.2684+05	4.8000+04	13600	.978	.021	.001	.000	2.5146+05	6.5705+04
7200	.971	.026	.002	.000	9.1588+05	3.2107+04	13700	.979	.021	.001	.000	2.4888+05	4.9689+04
7300	.972	.026	.002	.000	9.0499+05	2.2903+04	13800	.979	.020	.001	.000	2.4634+05	3.8760+04
7400	.972	.025	.002	.000	8.9418+05	1.7141+04	13900	.979	.020	.001	.000	2.4384+05	3.1082+04
7500	.973	.025	.002	.000	8.8346+05	1.3315+04	14000	.979	.020	.001	.000	2.4137+05	2.5495+04
7600	.973	.024	.002	.000	8.7282+05	1.0652+04	14100	.979	.020	.001	.000	2.3894+05	2.1355+04
7700	.974	.024	.002	.000	8.6226+05	8.7276+03	14200	.979	.020	.001	.000	2.3654+05	1.8149+04
7800	.974	.024	.002	.000	8.5182+05	7.2923+03	14300	.979	.020	.001	.000	2.3418+05	1.5675+04
7900	.975	.023	.002	.000	8.4148+05	6.1934+03	14400	.980	.020	.001	.000	2.3184+05	1.3710+04
8000	.975	.023	.002	.000	8.3206+05	5.3329+03	14500	.980	.020	.001	.000	2.2955+05	1.2160+04
8100	.976	.022	.002	.000	8.2188+05	4.6461+03	14600	.980	.019	.001	.000	2.2726+05	1.6017+04
8200	.976	.022	.002	.000	8.1177+05	4.0887+03	14700	.980	.019	.001	.000	2.2484+05	1.5252+04
8300	.977	.022	.002	.000	8.0241+05	6.6221+04	14800	.980	.019	.001	.000	2.2246+05	1.4675+04
8400	.977	.021	.002	.000	7.9319+05	7.5171+04	14900	.980	.019	.001	.000	2.2012+05	1.4260+04
8500	.977	.021	.002	.000	7.8407+05	8.5477+04	15000	.980	.019	.001	.000	2.1781+05	1.3982+04