

TABLE 6ATHERMAL NEUTRINO LOSS RATES ($\text{erg g}^{-1} \text{s}^{-1}$)^a

T_g/ρ	10^6	10^7	10^8	10^9	10^{10}	10^{11}	10^{12}
0.01	5.42(-11)	2.43(-22)	0.	0.	0.	0.	0.
0.03	9.39(-3)	2.99(-5)	3.96(-13)	4.39(-32)	0.	0.	0.
0.05	6.29(-1)	1.12(-1)	9.56(-6)	1.82(-16)	0.	0.	0.
0.10	2.54(1)	8.41(1)	4.83	1.33(-4)	2.78(-16)	0.	0.
0.30	1.47(3)	2.30(4)	8.12(4)	2.41(4)	3.45(1)	4.02(-7)	4.39(-26)
0.50	2.87(4)	1.39(5)	1.01(6)	1.69(6)	1.31(5)	9.72	1.82(-10)
1.00	6.45(7)	3.34(6)	1.43(7)	7.53(7)	1.01(8)	4.93(6)	1.33(2)
1.50	2.19(10)	7.85(8)	5.98(7)	4.03(8)	1.27(9)	5.03(8)	1.48(6)
2.00	6.93(11)	3.96(10)	4.31(8)	1.17(9)	5.39(9)	5.82(9)	1.74(8)
3.00	4.81(13)	4.14(12)	1.13(11)	4.97(9)	3.04(10)	8.38(10)	2.42(10)
4.00	7.48(14)	7.25(13)	3.67(12)	3.09(10)	9.04(10)	3.80(11)	3.26(11)
5.00	5.87(15)	5.89(14)	4.05(13)	4.95(11)	2.01(11)	1.06(12)	1.70(12)
7.00	1.26(17)	1.27(16)	1.13(15)	3.52(13)	7.21(11)	4.16(12)	1.31(13)
10.00	3.23(18)	3.24(17)	3.20(16)	1.90(15)	1.64(13)	1.55(13)	7.60(13)

^a The thermal rate is the sum of the plasma, pair, and photo process neutrino loss rates.**TABLE 6B**PLASMA PROCESS NEUTRINO LOSS RATES ($\text{erg g}^{-1} \text{s}^{-1}$)

T_g/ρ	10^6	10^7	10^8	10^9	10^{10}	10^{11}	10^{12}
0.01	5.42(-11)	2.43(-22)	0.	0.	0.	0.	0.
0.03	9.39(-3)	2.99(-5)	3.96(-13)	4.39(-32)	0.	0.	0.
0.05	6.29(-1)	1.12(-1)	9.56(-6)	1.82(-16)	0.	0.	0.
0.10	2.53(1)	8.41(1)	4.83	1.33(-4)	2.78(-16)	0.	0.
0.30	1.12(3)	2.30(4)	8.12(4)	2.41(4)	3.45(1)	4.02(-7)	4.39(-26)
0.50	4.47(3)	1.36(5)	1.01(6)	1.69(6)	1.31(5)	9.72	1.82(-10)
1.00	2.30(4)	1.07(6)	1.42(7)	7.53(7)	1.01(8)	4.93(6)	1.33(2)
1.50	5.37(4)	3.08(6)	5.42(7)	4.03(8)	1.27(9)	5.03(8)	1.48(6)
2.00	9.37(4)	6.12(6)	1.32(8)	1.16(9)	5.39(9)	5.82(9)	1.74(8)
3.00	1.93(5)	1.47(7)	4.33(8)	4.66(9)	3.04(10)	8.38(10)	2.42(10)
4.00	3.11(5)	2.56(7)	9.49(8)	1.18(10)	9.02(10)	3.80(11)	3.26(11)
5.00	4.40(5)	3.80(7)	1.68(9)	2.38(10)	1.99(11)	1.05(12)	1.70(12)
7.00	7.20(5)	6.57(7)	3.69(9)	6.60(10)	6.20(11)	4.16(12)	1.31(13)
10.00	1.17(6)	1.11(8)	7.65(9)	1.85(11)	1.96(12)	1.54(13)	7.60(13)

TABLE 6CPAIR PROCESS NEUTRINO LOSS RATES (erg g⁻¹ s⁻¹)

T_g/ρ	10^6	10^7	10^8	10^9	10^{10}	10^{11}	10^{12}
0.01	0.	0.	0.	0.	0.	0.	0.
0.03	0.	0.	0.	0.	0.	0.	0.
0.05	0.	0.	0.	0.	0.	0.	0.
0.10	0.	0.	0.	0.	0.	0.	0.
0.30	1.42(-8)	2.22(-13)	1.64(-23)	0.	0.	0.	0.
0.50	7.70	6.49(-3)	2.57(-9)	9.82(-23)	0.	0.	0.
1.00	5.92(7)	8.37(5)	1.57(2)	6.61(-6)	1.96(-20)	0.	0.
1.50	2.17(10)	7.37(8)	1.11(6)	4.95	3.65(-10)	1.86(-30)	0.
2.00	6.92(11)	3.91(10)	2.30(8)	1.23(4)	1.45(-4)	4.05(-20)	0.
3.00	4.81(13)	4.12(12)	1.09(11)	9.65(7)	1.97(2)	3.03(-9)	5.32(-31)
4.00	7.48(14)	7.23(13)	3.63(12)	1.53(10)	4.51(5)	1.65(-3)	3.68(-20)
5.00	5.87(15)	5.88(14)	4.02(13)	4.37(11)	6.97(7)	6.86	1.77(-13)
7.00	1.26(17)	1.27(16)	1.13(15)	3.43(13)	4.29(10)	1.90(5)	1.55(-5)
10.00	3.23(18)	3.23(17)	3.19(16)	1.88(15)	1.24(13)	1.03(9)	3.61(1)

TABLE 6DPHOTO PROCESS NEUTRINO LOSS RATES (erg g⁻¹ s⁻¹)

T_g/ρ	10^6	10^7	10^8	10^9	10^{10}	10^{11}	10^{12}
0.01	9.02(-27)	0.	0.	0.	0.	0.	0.
0.03	3.48(-10)	3.11(-18)	1.20(-35)	0.	0.	0.	0.
0.05	3.46(-6)	5.53(-11)	1.52(-21)	0.	0.	0.	0.
0.10	1.27(-2)	8.37(-5)	3.65(-10)	1.51(-21)	0.	0.	0.
0.30	3.48(2)	2.41(1)	4.40(-1)	6.07(-5)	3.35(-13)	1.21(-30)	0.
0.50	2.43(4)	3.10(3)	1.08(2)	6.29(-1)	6.06(-6)	1.54(-16)	5.48(-39)
1.00	5.23(6)	1.43(6)	9.03(4)	2.67(3)	1.00(1)	4.00(-5)	1.63(-16)
1.50	1.20(8)	4.51(7)	4.44(6)	1.60(5)	3.09(3)	8.15(-1)	1.68(-8)
2.00	1.17(9)	5.31(8)	6.78(7)	3.22(6)	8.89(4)	2.10(2)	3.26(-4)
3.00	3.04(10)	1.74(10)	3.04(9)	2.15(8)	7.10(6)	1.13(5)	1.53(1)
4.00	3.06(11)	2.00(11)	4.33(10)	3.83(9)	1.61(8)	4.18(6)	5.95(3)
5.00	1.81(12)	1.30(12)	3.32(11)	3.37(10)	1.76(9)	5.14(7)	2.92(5)
7.00	2.56(13)	2.05(13)	6.84(12)	8.28(11)	5.81(10)	2.00(9)	3.87(7)
10.00	4.08(14)	3.57(14)	1.57(14)	2.31(13)	2.01(12)	9.63(10)	2.73(9)