APPENDIX C

The electron properties are given in this appendix in the form of a computer output. An explanation of the symbols follows:

P = pressure, atm.

T = temperature, °K

NTOT = n = total number density, $cm.^{-3}$

DEBYE = d = Debye length, cm.

LAMBDA = $\Lambda \equiv 2d/b_o$

LNLMBD = $\ln \Lambda$

N1, N2, N3, N4, etc. = number densities of electrons, atoms, 1st ion, 2nd ion, etc., $cm.^{-3}$

B = magnetic field, Gauss

OM-TAU = $\omega_e \tau_e$ = cyclotron frequency x collision time for electrons.

SIG-1 = $\sigma^{\perp}$ (= $\sigma^{\parallel}$ when B = 0), mho/cm.

SIG-2 = σ^{H} , mho/cm.

DT-1 = $D_e^{T\perp}$ (= $D_e^{T\parallel}$ when B = 0), gm/cm-sec

DT-2 = D_e^{TH} , g/cm-sec

LAM-1 = $\lambda_e^{\perp}$ (= $\lambda_e^{\parallel}$ when B = 0), mW/cm-°K

LAM-2 = λ_e^{H} , mW/cm-°K

(see Appendix D for the atom-ion translation and the reactive thermal conductivities)

P= 0.001 T= 3000. NTOT=2.45E 15 DEBYE=8.90E-01 LAMBDA=6.39E 06 LNLMBD=15.67
N1=1.80328E 05 N2=2.44650E 15 N3=1.80328E 05 N

B	CM-TAU	SIG-1	SIG-2	DT-1	DT-2	LAM-1	LAM-2
0.	0.00E-01	1.89E-05	0.00E-01	-2.88E-14	0.00E-01	2.98E-07	0.00E-01
500.	-1.07E 03	5.39E-12	5.78E-09	1.51E-20	-7.15E-23	9.55E-13	3.22E-10
1000.	-2.14E 03	1.35E-12	2.89E-09	3.78E-21	-8.94E-24	2.39E-13	1.61E-10
2500.	-5.36E 03	2.16E-13	1.16E-09	6.04E-22	-5.72E-25	3.82E-14	6.44E-11
5000.	-1.07E 04	5.39E-14	5.78E-10	1.51E-22	-7.15E-26	9.55E-15	3.22E-11
7500.	-1.61E 04	2.40E-14	3.85E-10	6.71E-23	-2.12E-26	4.25E-15	2.15E-11
10000.	-2.14E 04	1.35E-14	2.89E-10	3.78E-23	-8.94E-27	2.39E-15	1.61E-11
25000.	-5.36E 04	2.16E-15	1.16E-10	6.04E-24	-5.72E-28	3.82E-16	6.44E-12
50000.	-1.07E 05	5.39E-16	5.78E-11	1.51E-24	-7.15E-29	9.55E-17	3.22E-12
100000.	-2.14E 05	1.35E-16	2.89E-11	3.78E-25	-8.94E-30	2.39E-17	1.61E-12
150000.	-3.21E 05	5.99E-17	1.93E-11	1.68E-25	-2.65E-30	1.06E-17	1.07E-12

P= 0.001 T= 4000. NTOT=1.83E 15 DEBYE=2.18E-02 LAMBDA=2.08E 05 LNLMBD=12.25
N1=4.02511E 08 N2=1.83487E 15 N3=4.02511E 08 N

B	CM-TAU	SIG-1	SIG-2	DT-1	DT-2	LAM-1	LAM-2
0.	0.00E-01	3.72E-02	0.00E-01	-8.28E-11	0.00E-01	6.53E-04	0.00E-01
500.	-8.25E 02	1.56E-08	1.29E-05	5.58E-17	-3.20E-19	3.48E-09	9.58E-07
1000.	-1.65E 03	3.91E-09	6.45E-06	1.40E-17	-4.00E-20	8.71E-10	4.79E-07
2500.	-4.13E 03	6.25E-10	2.58E-06	2.23E-18	-2.56E-21	1.39E-10	1.92E-07
5000.	-8.25E 03	1.56E-10	1.29E-06	5.59E-19	-3.20E-22	3.48E-11	9.58E-08
7500.	-1.24E 04	6.95E-11	8.60E-07	2.48E-19	-9.47E-23	1.55E-11	6.38E-08
10000.	-1.65E 04	3.91E-11	6.45E-07	1.40E-19	-4.00E-23	8.71E-12	4.79E-08
25000.	-4.13E 04	6.25E-12	2.58E-07	2.23E-20	-2.56E-24	1.39E-12	1.92E-08
50000.	-8.25E 04	1.56E-12	1.29E-07	5.59E-21	-3.20E-25	3.48E-13	9.58E-09
100000.	-1.65E 05	3.91E-13	6.45E-08	1.40E-21	-4.00E-26	8.71E-14	4.79E-09
150000.	-2.48E 05	1.74E-13	4.30E-08	6.21E-22	-1.18E-26	3.87E-14	3.19E-09

P= 0.001 T= 5000. NTOT=1.47E 15 DEBYE=2.39E-03 LAMBDA=2.86E 04 LNLMBD=10.26
N1=4.16924E 10 N2=1.46782E 15 N3=4.16924E 10 N

B	CM-TAU	SIG-1	SIG-2	DT-1	DT-2	LAM-1	LAM-2
0.	0.00E-01	1.05E 00	0.00E-01	-1.02E-09	0.00E-01	3.20E-02	0.00E-01
500.	-5.41E 02	2.47E-06	1.34E-03	6.68E-15	-5.71E-17	6.14E-07	1.24E-04
1000.	-1.08E 03	6.17E-07	6.68E-04	1.67E-15	-7.14E-18	1.53E-07	6.20E-05
2500.	-2.71E 03	9.87E-08	2.67E-04	2.67E-16	-4.57E-19	2.45E-08	2.48E-05
5000.	-5.41E 03	2.47E-08	1.34E-04	6.68E-17	-5.71E-20	6.14E-09	1.24E-05
7500.	-8.12E 03	1.10E-08	8.91E-05	2.97E-17	-1.69E-20	2.73E-09	8.27E-06
10000.	-1.08E 04	6.17E-09	6.68E-05	1.67E-17	-7.14E-21	1.53E-09	6.20E-06
25000.	-2.71E 04	9.87E-10	2.67E-05	2.67E-18	-4.57E-22	2.45E-10	2.48E-06
50000.	-5.41E 04	2.47E-10	1.34E-05	6.68E-19	-5.71E-23	6.14E-11	1.24E-06
100000.	-1.08E 05	6.17E-11	6.68E-06	1.67E-19	-7.14E-24	1.53E-11	6.20E-07
150000.	-1.62E 05	2.74E-11	4.45E-06	7.42E-20	-2.11E-24	6.82E-12	4.13E-07

P= 0.001 T= 6000. NTOT=1.22E 15 DEBYE=5.55E-04 LAMBDA=7.97E 03 LNLMBD= 8.98
N1=9.27992E 11 N2=1.22139E 15 N3=9.27992E 11 N

B	CM-TAU	SIG-1	SIG-2	DT-1	DT-2	LAM-1	LAM-2
0.	0.00E-01	4.65E 00	0.00E-01	3.58E-09	0.00E-01	2.20E-01	0.00E-01
500.	-1.25E 02	2.37E-04	2.97E-02	-5.01E-13	3.54E-14	5.34E-05	3.31E-03
1000.	-2.51E 02	5.92E-05	1.49E-02	-1.25E-13	5.48E-15	1.33E-05	1.66E-03
2500.	-6.27E 02	9.48E-06	5.95E-03	-2.01E-14	7.68E-16	2.14E-06	6.62E-04
5000.	-1.25E 03	2.37E-06	2.97E-03	-5.02E-15	2.81E-16	5.34E-07	3.31E-04
7500.	-1.88E 03	1.05E-06	1.98E-03	-2.23E-15	1.75E-16	2.37E-07	2.21E-04
10000.	-2.51E 03	5.92E-07	1.49E-03	-1.25E-15	1.27E-16	1.33E-07	1.66E-04
25000.	-6.27E 03	9.48E-08	5.95E-04	-2.01E-16	4.94E-17	2.14E-08	6.62E-05
50000.	-1.25E 04	2.37E-08	2.97E-04	-5.02E-17	2.47E-17	5.34E-09	3.31E-05
100000.	-2.51E 04	5.92E-09	1.49E-04	-1.25E-17	1.23E-17	1.33E-09	1.66E-05
150000.	-3.76E 04	2.63E-09	9.91E-05	-5.57E-18	8.21E-18	5.93E-10	1.10E-05