Erratum: Energy relaxation and the quasiequation of state of a dense two-temperature nonequilibrium plasma [Phys. Rev. E 58, 3705 (1998)]

M. W. C. Dharma-wardana, and François Perrot

(Published 15 May 2001)

DOI: 10.1103/PhysRevE.63.069901 PACS number(s): 52.25.Kn, 52.25.Gj, 05.30.Fk, 71.10.−w, 99.10.+g

We wish to correct a numerical mistake in Table II where the numbers have to be rescaled by a multiplicative factor. Here we present revised values, where we have also used a more recent local-field correction, viz., see Phys. Rev. B **62**, 16 536 (2000), in the electron response functions. The ion-ion static structure factor for Al at the melting point has also been recalculated using an Ashcroft-type pseudopotential described in Phys. Rev. B **28**, 1701 (1983). For higher electron temperatures relevant to the nonequilibrium problem, the pseudopotentials given in Table I were used as before. The revised values of the coupling constants calculated using the Fermi golden rule (FGR) and the Spitzer model (S) are within about a factor of 3. The coupled-mode (CM) results are an order of magnitude smaller. Hence the main conclusions of the paper remain unchanged. The corrected table is given below [1].

TABLE I. Calculated values of the electron-ion coupling constant $\overline{g_{cc}}$ for Al at normal density and with $T_i = 0.08126$ eV. Results from the Spitzer (S), Fermi golden rule (FGR), and coupled mode (CM) calculation are given in Watts/Kelvin/cubic meter.

T (eV)	S/10^{19}	FGR/10^{18}	CM/10^{17}
3.0	0.1998	0.6100	0.5469
4.0	0.2216	0.6386	0.6064
5.0	0.2360	0.6634	0.6375
7.0	0.2504	0.6897	0.6358
9.0	0.2390	0.7805	0.6132
10.0	0.2211	0.8679	0.6029
15.0	0.2079	1.0206	0.7942
20.0	0.2071	1.2962	0.9150
25.0	0.2267	1.1753	1.0697
30.0	0.2493	1.4276	1.3099
35.0	0.2829	1.8898	1.5673
40.0	0.3191	2.0012	1.3346

[1] More details are given at the website: http://nrcphy1.phy.nrc.ca/ims/qp/chandre/Lst/.

 ©2001 The American Physical Society