Calculation of the ionic composition of a hot non-LTE plasma using a superconfiguration model

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Calculations of the average ion charge of hot non-LTE plasmas of germanium, aluminum and gold have been performed within the framework of the superconfiguration model [1], taking into account one-electron processes. The calculations were compared with the results of the average atom model obtained with the RESEOS code [2]. A good agreement between the data was obtained.

[1] Bar-Shalom A, Oreg J, Goldstein W, Shvarts D and Zigler A 1989 *Physical Review A* **40** 3183
[2] Ovechkin A, Loboda P, Korolev A, Kolchugin S, Vichev I Y, Solomyannaya A, Kim D and Grushin A 2022 *Matter and Radiation at Extremes* **7** 064401