Abstract Submitted
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Evolution of Xe spectrum and ion charge under sudden incoming radiation[1] MARCEL KLAPISCH, MICHEL BUSQUET, ARTEP, inc Ellicott City, MD21042 — Experiments [1] and simulations of Xe at high temperature were recently reported, due to the possible scaling of astrophysical radiative shocks [2]. We used the newest version of HULLAC [3] to compute energy levels, radiative and collisional transition rates and level populations in a Coronal Radiative Model for the ions Xe9+ to Xe44+ (36263 configurations), at electron temperature of 100 eV and electron density of 10^{19} – 10^{21} e/cm^3, in the presence of an external Planckian radiation field. Static and time dependent influence of the radiation on ion charge and spectrum is described. We show an effect of shell structure on relaxation of ion charge when the radiation field is suddenly turn on.

[1] Busquet, M., Thais, F., Gonzalez, M.*, et al.*, J. App. Phys. **107**, 083302 (2010).
[2] Ryutov, D., Drake, R. P., Kane, J.*, et al.*, Astrophys. J. **518**, 821 (1999).
[3] Klapisch, M. and Busquet, M., High Ener. Dens. Phys. **7**, 98 (2011).

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